DSR-30/30P
RMT-DS30

SERVICE MANUAL

US Model
Canadian Model
DSR-30
AEP Model
DSR-30P

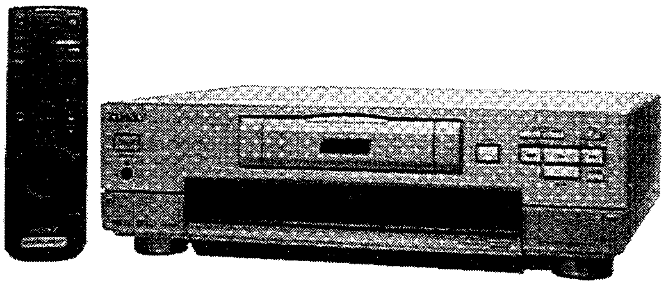


PHOTO : DSR-30

E MECHANISM

NTSC : DSR-30
PAL : DSR-30P

SPECIFICATIONS

System

Recording format
DVCAM format

Video signal
DSR-30: EIA STANDARD, NTSC color system
DSR-30P: CCIR STANDARD, PAL colour system

Usable cassettes
Standard-DVCAM cassettes and Mini-DVCAM cassettes

Recording time
184 minutes (when using the PDV-184ME cassette)
40 minutes (when using the PDVM-40ME cassette)

Clock
Quartz locked
DSP-30: 12-hour cycle display
DSP-30P: 24-hour cycle display

Power back-up
Built-in self-charging capacitor
Back-up duration: up to 30 minutes

Inputs and outputs

Video input
LINE-1 IN, BNC connector
Input signal: 1 Vp-p (75 ohms unbalanced)
LINE-2 IN, pin jack
Input signal: 1 Vp-p (75 ohms unbalanced)

Video output
LINE-1/LINE-2 OUT, BNC connector
Output signal: 1 Vp-p (75 ohms unbalanced)

S VIDEO input
LINE-1/LINE-2 IN, Mini DIN 4-pin
Luminance signal: 1 Vp-p (75 ohms unbalanced)
Chrominance signal: 0.286 Vp-p (75 ohms unbalanced)

S VIDEO output
LINE-1/LINE-2 OUT, Mini DIN 4-pin
Luminance signal: 1 Vp-p (75 ohms unbalanced)
Chrominance signal: 0.286 Vp-p (75 ohms unbalanced)

Audio input
LINE-1/LINE-2 IN, phono jack (L, R)
Input level: 2 Vrms (full bit)
Input impedance: more than 47 kohms)

Audio output (ID-2)
LINE-1/LINE-2 OUT, phono jack (L, R)
Output level: 2 Vrms (full bit)
Output impedance: less than 10 kohms)

Control S input/output
Minijack

Control S output
Minijack

LANC input/output
Front panel and rear panel
Stereo mini-mini jack (2)

Headphone output
Stereo minijack (1)

Microphone input
Minijack (1) (monaural)

DV IN / OUT
4-pin jack (1)

– Continued on next page –

DVCAM™ **DIGITAL VIDEO CASSETTE RECODER**

MICROFILM

SONY®

General

Power requirements
DSP-30: 120 V AC, 60 Hz
DSP-30P: 220 – 240 V AC, 50 Hz

Power consumption
37 W

Operating temperature
5°C to 40°C (41°F to 104°F)

Storage temperature
-20°C to +60°C (-4°F to +140°F)

Dimensions
Approx. 430 × 129 × 374 mm
(17 × 5 ⅛ × 14 ¾ inches)
(w/h/d, including projecting parts and controls)

Mass
Approx. 10 kg (22 lb. 7 oz.)

Supplied accessories
Remote commander (1)
Size AA (R6) batteries (2)
AC power cord (1)
LANC cable (1)
Cleaning cassette (1)

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
6. Check the B+ voltage to see it is at the values specified.
7. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

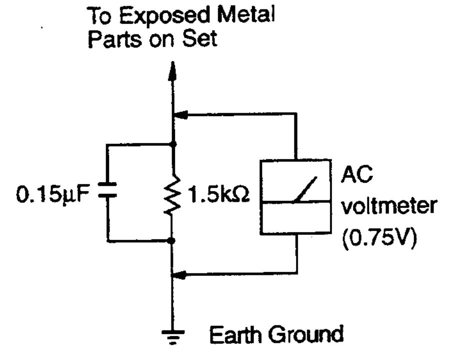


Fig. A. Using an AC voltmeter to check AC leakage.

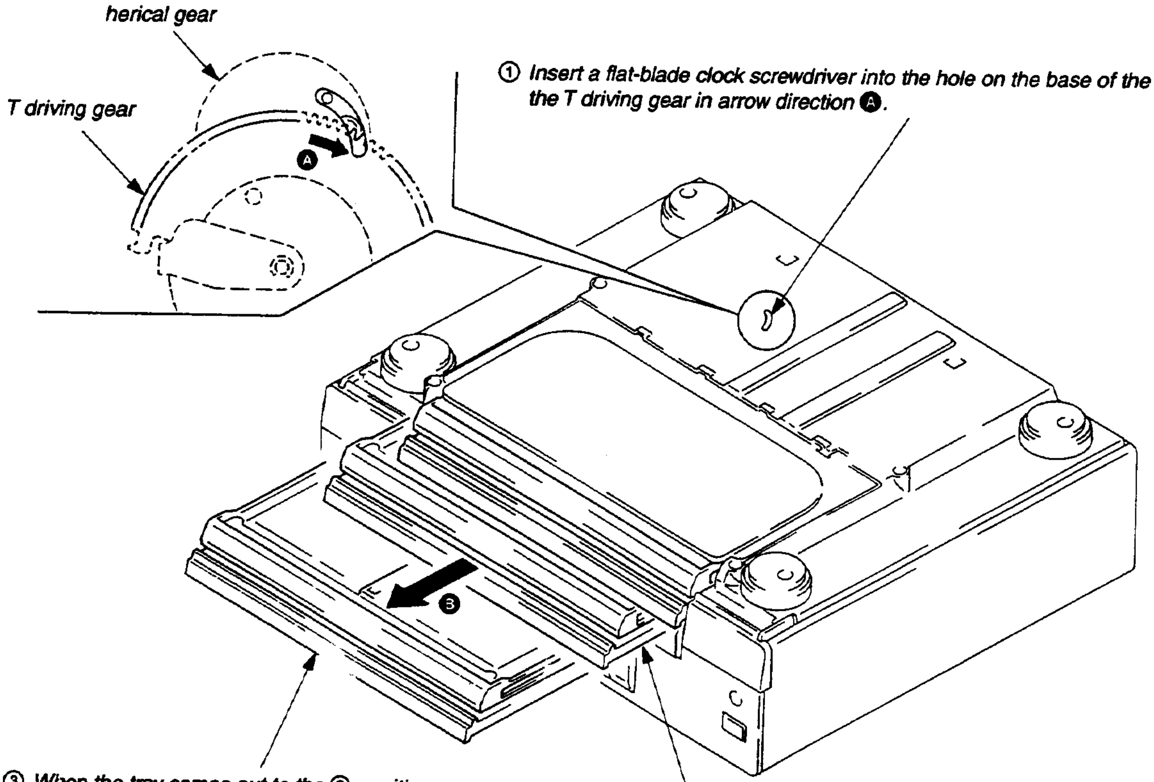
LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

SERVICE NOTE

• Removing the Tray (Controller) Manually



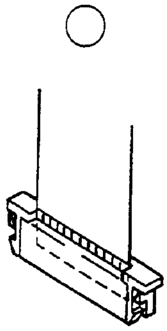
① *Insert a flat-blade clock screwdriver into the hole on the base of the unit and rotate the T driving gear in arrow direction* Ⓐ.

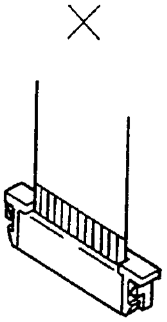
③ *When the tray comes out to the ② position, pull it in arrow direction* Ⓑ *with your hand.*

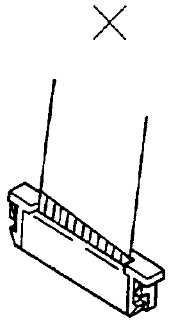
② *Tray*

• Note for Repair

Make sure that the flat cable and flexible board are not cracked or bent at the terminal.
Do not insert the cable insufficiently nor crookedly.







Cut and remove the part of gilt which comes off at the point.
(Take care that there is some pieces of gilt left inside.)

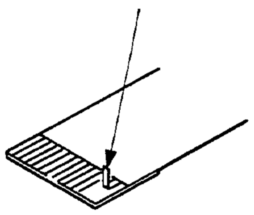


TABLE OF CONTENTS

Section Title Page

SERVICE NOTE ... 4

1. GENERAL

Notes on video cassetes ... 1-1
Notes on recording/playback ... 1-1
Main unit ... 1-2
Remote commander ... 1-5
MENU chart ... 1-7
Setting the clock ... 1-7
Changing menu options ... 1-8
Adjusting the picture color (Y/C delay) ... 1-9
Erasing the cassette memory ... 1-10
Playing at various speeds ... 1-10
Searching using the index function ... 1-11
Displaying tape information ... 1-12
Watching wide pictures ... 1-13
Auto Repeat ... 1-13
One Program Play ... 1-14
AC timer recording ... 1-14
Setting the timer (DSR-30P only) ... 1-15
Checking/changing/cancelling timer settings (DSR-30P only) ... 1-15
Editing methods ... 1-16
Connections and preparation ... 1-17
Synchronized editing ... 1-18
Duplicate ... 1-19
Assemble editing ... 1-19
Video/audio insert ... 1-20
Connecting other equipment ... 1-23
Precautions ... 1-23
Compatibility of DVCAM and DV format ... 1-25
Warning and notice messages ... 1-26

2. DISASSEMBLY

2-1. Removal of Top Plate and Side Panel ... 2-1
2-2. Removal of Front Panel Assembly ... 2-1
2-3. Removal of C Door Assembly ... 2-2
2-4. Opening of TB-30 Board. (Service Position) ... 2-2
2-5. Removal of JC-18 Board and DF-12 Board ... 2-3
2-6. Removal of MD Block Assembly ... 2-4
2-7. Service Position of RP-193 Board (Check or Adjustment of The Recording Current) ... 2-5
2-8. Service Position of CM-49 Board (Check or Adjustment of The Servo, System Control) ... 2-6
2-9. Removal of Bottom cabinet Block Assembly ... 2-7
2-10. Removal of Tray Block Assembly ... 2-8
2-11. Removal of T Motor Assembly ... 2-9
2-12. Removal of Bottom Plate ... 2-10
2-13. Removal of VA-99 Board and YC-144 Board ... 2-10
2-14. Internal Views ... 2-11
2-15. Circuit Boards Location ... 2-12

Section Title Page

3. BLOCK DIAGRAMS

3-1. Overall Block Diagram (1) ... 3-1
3-2. Overall Block Diagram (2) ... 3-4
3-3. Power Block Diagram ... 3-7

4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. Frame Schematic Diagram ... 4-1
4-2. Printed Wiring Boards and Schematic Diagrams ... 4-6
- RP-193 Board ... 4-7
- JC-18 (A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core) Board ... 4-15
- JC-18 (A/D, D/A Converter) Board ... 4-19
- JC-18 (Just AFC, Encode) Board ... 4-24
- JC-18 (Magic) Board ... 4-29
- JC-18 (BLK-Comp) Board ... 4-33
- JC-18 (FDF-CTLG-SPCON) Board ... 4-37
- JC-18 (SFY) Board ... 4-40
- JC-18, IN-51 (DV in/out) Board ... 4-43
- JC-18 (Digital Audio) Board ... 4-48
- JC-18 (Audio D/A, A/D Converter) Board ... 4-51
- JC-18 (Audio Core) Board ... 4-54
- DF-12 Board ... 4-57
- VA-99 (YC Processor, System Control, Audio, Line in/out, Mode Control) Board ... 4-62
- VA-99 (YC Processor 1) Board ... 4-67
- VA-99 (YC Processor 2) Board ... 4-72
- VA-99 (System Control) Board ... 4-77
- VA-99 (Audio) Board ... 4-80
- VA-99 (Line in/out) Board ... 4-83
- VA-99 (Mode Control) Board ... 4-87
- FJ-19 Board ... 4-91
- YC-144 Board ... 4-95
- HP-91 Board ... 4-104
- MD-63, MD-64, MD-65 (Tape Detect), FP-406 (Tape Sensor) Boards ... 4-107
- CM-49 Board ... 4-112
- FL-69 (Remote Control Receiver), FM-26 (Display Control) Boards ... 4-122
- TB-30 Board ... 4-128
- TK-37 (PAL Model)/TK-42 (NTSC Model) (Tray Motor Drive), CN-93 (PAL Model)/ CN-105 (NTSC Model) (Connector) Boards ... 4-133
- PS-347, 348 (PAL Model) (Power) Boards ... 4-136
- PS-394, 395 (NTSC Model) (Power), SW-274 (Open/Close Switch) Boards ... 4-138
- PS-347, 348 (PAL Model) (Power), PS-394, 395 (NTSC Model) (Power), SW-274 (Open/Close Switch) Boards ... 4-141
- Power Block (NTSC/PAL Model) ... 4-145

Section Title Page

5. ADJUSTMENTS

5-1. MECHANICAL SECTION ADJUSTMENTS 5-1
5-1-1. Information 5-1
1. How to Search Reference Pages for Removal 5-1
2. Phase Adjustment Mark “(PH-)” 5-1
5-1-2. Preparation for Mechanical Check, Adjustment and Maintenance 5-2
2-1. FL Block Assembly 5-2
2-2. Cassette Positions 5-2
2-3. Loading/Unloading 5-3
2-4. Manual Up/Down the FL Block 5-3
2-5. Service Jigs List 5-4
5-1-3. Phase Adjustments 5-6
3-1. Phase Adjustment (Loading/Unloading Driving Section) 5-6
3-2. Phase Adjustment (S/L Cassette Selection Section) 5-8
3-3. Phase Adjustment (Mechanism Chassis Upper Surface Parts) 5-10
5-1-4. Periodic Check and Maintenance 5-12
4-1. Cleaning of Rotary Drum Assembly 5-12
4-2. Cleaning of Tape Path System 5-12
4-3. Periodic checks 5-13
5-1-5. Mechanism Section Checks and Replacements 5-14
5-1. Tape Stopper, Motor FPC Assembly and Elastic Connector 5-14
5-2. Drum Assembly and Drum Base 5-14
5-3. LM Cover, LM Worm Wheel, LM Holder and LM Motor Assembly 5-15
5-4. TG3/4 Catcher Block Assembly, Pinch Driving Gear and TC Arm Assembly 5-15
5-5. Pinch Arm Assembly, Pinch Limiter and Tension Coil Spring (Pinch) 5-16
5-6. HC Arm, HC Roller Assembly, Pinch Retainer, Pinch Cam Gear and TG5/6 Catcher Block Assembly 5-16
5-7. RL Arm and RL Link 5-17
5-8. Gooseneck Guard and Gooseneck Arm Assembly 5-17
5-9. Tension Coil Spring (TG2), Spring Adjustor, TG2 Spring Hook, TG2 Selection Arm and Damper Sheet 5-18
5-10. Tension Coil Spring (TG7), Spring Adjustor and TG7 Spring Hook 5-18
5-11. TG2 Retainer, TG2 Arm Assembly (TG2 Plate Spring and ET Magnet), S Tension Regulator Band Assembly and TG2 Load Arm Assembly 5-19
5-12. TG7 Retainer, TG7 Arm Assembly (TG7 Plate Spring and ET Magnet), T Tension Regulator Band Assembly and TG7 Load Arm Assembly 5-20
5-13. S Reel Table Block Assembly 5-21
5-14. T Reel Holder and T Reel Table Block Assembly 5-22
5-15. S Reel Plate Assembly 5-22
5-16. T Reel Plate Assembly 5-24
5-17. TG1/8 Base Assembly, S Brake and T Ratchet 5-25
5-18. TG3/6 Roller Assembly and TG3/6 Lock Spring 5-26
5-19. FL Joint Gear, TG5/6 Retainer and Capstan Motor 5-26
5-20. FL Selection Arm, FL Relay Gear and FL Joint Arm Assembly 5-27
5-21. Rotary Switch, TC Gear and Relay Gear 5-27
5-22. GL Arm Retainer and GL Arm 5-28
5-23. M Slider and M Slider Arm 5-28
5-24. TG7 Selection Arm, TG7 Cam Gear and T Cam Gear 5-28
5-25. Main Cam, TG2 SL Arm Assembly and Tension Coil Spring (TG2 SL) 5-29
5-26. TG3/4 Arm Block Assembly (TG3/4 Arm Assembly, TG3/4 Limiter Spring and TG3/4 Gear) TG3/4 Base Block Assembly (TG3/4 Base Assembly) 5-30
5-27. TG5/6 Arm Block Assembly (TG5/6 Arm Assembly, TG5/6 Limiter Spring and TG5/6 Gear) TG5/6 Base Block Assembly (TG5/6 Base Assembly) 5-32
5-28. Reel Motor 5-34
5-29. RS Arm Assembly 5-34
5-30. RS Gear Assembly, Mic Press Spring and Mic Lever 5-34
5-31. Rack Joint Gear, Rack Holder, Mic Holder, Rack (LC) and Rack (SC) 5-35
5-32 Plate Link Assembly 5-36
5-33. Roller Shaft Assembly and Roller Belt 5-38
5-34. Lid Opener 5-39
5-35. C Door 5-40
5-36. Damper Arm And Tension Spring (DB) 5-40
5-37. Gear (A), Gear (B) and C Worm 5-40
5-38. Tension Coil Spring (HS), Tension Spring (DB), Shift Plate Spring and C Sloat Block Assembly 5-41
5-1-6. Adjustments and Checks 5-42
6-1. Adjustment Position 5-42
6-2. Adjustment Order 5-43
6-3. Adjustment and Checking Method 5-44
6-3-1. Reel Table Height Adjustment 5-44
6-3-2. TG2/TG7 Height Adjustment 5-45
6-3-3. FWD/RVS Position Adjustment 5-45
6-3-4. TG2/TG7 Electric Tension Regulator Adjustment. 5-46
6-3-5. FWD/RVS Back Tension Adjustment 5-48
6-3-6. Adjustment Preparations and RF Waveform Check 5-49
6-3-7. Tracking Adjustment 5-50
6-3-8. Tracking Check 5-51
6-3-9. CUE and REV Check 5-52
6-3-10. Rising Check 5-53
6-3-11. Tape Path Check 5-54

5-2. VIDEO SECTION ADJUSTMENTS 5-55
2-1. Preparations before Adjustment 5-55
2-1-1. Equipment Used 5-55
2-1-2. Connection of Equipment 5-55
2-1-3. Setting of Switches 5-56
2-1-4. Adjusting Connectors (RP-193 Board CN775) 5-56
2-1-5. Checking the Input Signals 5-57
1. S Video Input 5-57
2. Video Input 5-57
2-1-6. Alignment Tapes 5-58
2-1-7. Input/Output Level and Impedance 5-58
2-1-8. Page D Address List 5-59
2-1-9. Page C Address List 5-60
2-2. Power Supply System Adjustments 5-61
1. Power Supply Voltage Check (PS-348 (PAL)/ PS-395 (NTSC) Board)) 5-61
2-3. System Control System Adjustments 5-62
1. Page D Initial Value Input 5-62
2. Page C Initial Value Input 5-62
3. Page E Initial Value Input 5-62
4. Timer Clock Adjustment (FM-26 Board) 5-62
2-4. Servo System Adjustments 5-63
1. Switching Position Adjustments (RP-193 Board) 5-63
1-1. Switching Position Rough Adjustment 5-63
1-2. Switching Position Fine Adjustment 5-64
2-5. Video System Adjustments 5-65
2-5-1. RP-193 Board Adjustments 5-65
1. Recording Current Adjustment (RP-193 Board) 5-65
2. PLL fo Adjustment (RP-193 Board) 5-65
3. AGC Center Level Adjustment (RP-193 Board) 5-66
4. CLK Delay Adjustment (RP-193 Board) 5-67

Section Title Page

5. AEQ Adjustment (RP-193 Board) ... 5-68
6. PLL Capture Range Adjustment (RP-193 Board) ... 5-69
2-5-2. JC-18 Board Adjustments ... 5-70
1. A/D Converter Reference Voltage Adjustment 1 (JC-18 Board) ... 5-70
2. A/D Converter Reference Voltage Adjustment 2 (JC-18 Board) ... 5-70
3. Y Signal Clamp Reference Voltage Adjustment (JC-18 Board) ... 5-70
4. CR Signal Clamp Reference Voltage Adjustment (JC-18 Board) ... 5-70
5. CB Signal Clamp Reference Voltage Adjustment (JC-18 Board) ... 5-70
6. Playback Y Signal Lever Adjustment (JC-18 Board) ... 5-71
7. Playback CR Signal Lever Adjustment (Encoder R-Y Input Level Temporary Adjustment) (JC-18 Board) ... 5-71
8. Playback CB Signal Lever Adjustment (JC-18 Board) ... 5-72
9. CTLG SPCK Adjustment (JC-18 Board) ... 5-72
10. AFC Preliminary Adjustment (JC-18 Board) ... 5-72
11. AFC Picture Frame Adjustment (JC-18 Board) ... 5-73
12. AFC Adjustment (JC-18 Board) ... 5-73
2-5-3. YC-144 Board Adjustments ... 5-73
1. Y/C Separation Input Level Check (YC-144 Board) ... 5-73
2. Y/C Separation Chroma Level Adjustment (YC-144 Board) ... 5-74
3. Y/C Separation Y Level Check (YC-144 Board) ... 5-74
2-5-4. VA-99 Board Adjustments ... 5-75
1. AGC Adjustment (VA-99 Board) ... 5-75
2. Analog E-E Y Signal Output Level Adjustment (VA-99 Board) ... 5-75
3. Analog E-E Chroma Signal Output Level Adjustment (VA-99 Board) ... 5-76
4. Analog E-E Video Signal Output Level Check (VA-99 Board) ... 5-76
5. Decoder VXO Freerunning Frequency Adjustment (VA-99 Board) ... 5-77
6. Decoder HUE Adjustment (VA-99 Board) ... 5-77
7. REC Y Level Adjustment (VA-99 Board) ... 5-78
8. REC CR Level Adjustment (VA-99 Board) ... 5-78
9. REC CB Level Adjustment (VA-99 Board) ... 5-79
10. NPS 4 fsc Freerunning Frequency Adjustment (VA-99 Board) ... 5-79
11. Playback Y Level Check (VA-99 Board) ... 5-79
12. Playback Chroma Level Adjustment (VA-99 Board) ... 5-80
13. Playback Burst Level Adjustment (VA-99 Board) (PAL model only) ... 5-80
2-5-5. General Adjustments ... 5-81
1. Encoder R-Y Input Level Adjustment (JC-18 Board) .. 5-81
2. Decoder HUE Input Adjustment (JC-18 Board) ... 5-81
2-6. Audio System Adjustments ... 5-82
1. Playback Level/indicator Check ... 5-82
2. E-E Level Check ... 5-82
3. Recording/Playback Check (Audio Lock Mode) ... 5-82
2-7. Arrangement Diagram for Adjusment Parts ... 5-84

Section Title Page

5-3. SERVICE MODE ... 5-89
3-1. Adjusting Remote Commander ... 5-89
3-2. Data Processing ... 5-90
3-3. Service Mode ... 5-91
1. Emergence Memory Address ... 5-91
1-1. EMG Code (Emergency Code) ... 5-91

6. REPAIR PARTS LIST

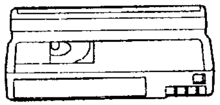
6-1. Exploded Views ... 6-1
6-1-1. Overall Section ... 6-1
6-1-2. Front Panel Section ... 6-2
6-1-3. Bottom Plate Block Section ... 6-3
6-1-4. Chassis Assembly (1) ... 6-4
6-1-5. Chassis Assembly (2) ... 6-5
6-1-6. MD Block Assembly ... 6-6
6-1-7. FL Cassette Compartment Assembly ... 6-7
6-1-8. Mechanism Chassis Assembly (1) (Top Side View (1)) ... 6-8
6-1-9. Mechanism Chassis Assembly (2) (Top Side View (2)) ... 6-9
6-1-10. Mechanism Chassis Assembly (3) (Top Side View (3)) ... 6-10
6-1-11. Mechanism Chassis Assembly (4) (Bottom Side View (1)) ... 6-11
6-1-12. Mechanism Chassis Assembly (5) (Bottom Side View (2)) ... 6-12
6-2. Electrcal Parts List ... 6-13
Hardware List ... 6-48

There is the color reproduction standard frame at the back of the book.

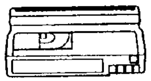
Notes on video cassetes

Usable cassettes

Use Standard-DVCAM cassettes or Mini-DVCAM cassettes with this VCR.
PDV-184ME can record programs for 184 minutes and PDVM-40ME can record for 40 minutes. You can get the highest quality pictures with this digital video cassette recorder using DVCAM cassettes. You may not be able to get as good quality with other cassettes. We recommend using DVCAM cassettes so that you can record your one-time events in highest quality.



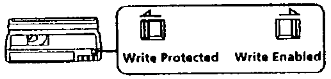
Standard DVCAM cassette



Mini DVCAM cassette

Cassette memory
Cassette memory is an optional feature that is mounted on some Standard DVCAM cassettes and Mini DVCAM cassettes. When you record a program, the recording date and time, and the programs' position on the tape are stored in the cassette memory so that you can quickly locate the program later on. CM 16K indicates that you can use the cassettes 16 kbits of data can be stored on. On this VCR, you can use the cassettes up to 16 kbits of data can be mounted on.

To save a recording
To prevent accidental erasure of a recording, slide in the safety switch on the cassette so that the red portion becomes visible. To record on a tape, slide out the switch so that the red portion is hidden.



Notes
- You cannot play back a DVCAM tape recorded in other color systems on this VCR.
- DVCAM, DV, DV and CM are trademarks.

Notes on recording/ playback

Copyright precautions

On recording
You cannot record any software having copyright protection signals on this VCR. If you start recording protected video and audio signals, a warning message appears on the monitor screen and the VCR stops recording.
For DSR-30P only: If you record a programme using timer, that is encoded with copyright protection signals, the VCR will continue recording but the video and audio signals will not be recorded on tape.

On playback
When you play back software having copyright protection signals on this VCR, you may not be able to copy it onto other equipment.

Limitations caused by the difference in format

This VCR can record, play back and edit the tapes recorded in DVCAM format. It can also play back the tapes recorded in DV format (SP mode). However, due to the difference in format, you may not be able to record or edit some tapes affected by recording conditions of the tape (e.g., A tape originally recorded in DV format is dubbed in DVCAM format.)
For details, refer to "Compatibility of DVCAM and DV format" on page 58.

No compensation for contents of the recording

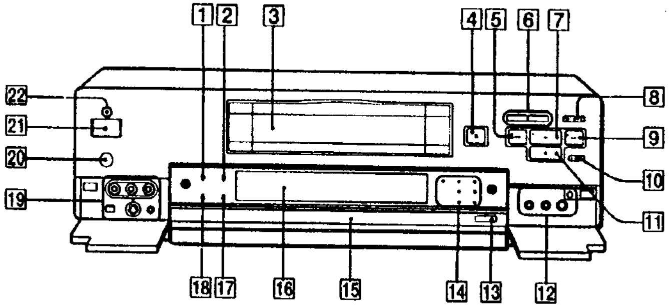
Contents of the recording cannot be compensated for if recording or playback is not made due to a malfunction of the VCR, video tape, etc.

This section is extracted from DSR-30/30P instruction manual.

Main unit

Refer to the pages indicated in ( ) for details.

Front panel



1 **NS AUDIO indicator**
Lights when the VCR plays back a tape whose audio recording was made in the unlock mode, or when unlock mode signals are input through the DV terminals.
For details, see "Compatibility of DVCAM and DV format" on page 58.

2 **DVCAM indicator**
Lights when the VCR records in DVCAM format or plays back a tape recorded in DVCAM format.

3 **Cassette compartment**

4 **≜ EJECT button**

5 **◄◄ REW button**

6 **COUNTER SELECT/RESET buttons (14)**
Press to switch the counter in the order of time code, remaining time and tape counter. Press RESET to reset the counter to "0:00:00 (0H00M00S)."

7 **► PLAY button**

8 **● REC button**
To set the VCR to recording pause mode, press ● while keeping ❚❚ pressed. You cannot set it to recording pause mode by pressing ● on the operation panel or the Remote Commander.

9 **►► FF button**

10 **❚❚ PAUSE button**

11 **■ STOP button**

12 **See section A on page 9.**

13 **OPERATION PANEL OPEN/CLOSE button (10)**

14 **See section B on page 9.**

15 **Operation panel**

16 **Display window**

17 **DF indicator (DSR-30 only)**
Lights when the VCR plays back a tape whose time code is recorded in drop frame mode or when the VCR records a program in drop frame mode, setting the TIME CODE in the SET UP MENU to "DF".

18 **WIDE indicator (30)**
Lights when the VCR plays back a tape which the wide screen signals are recorded on or when it detects input of WSS signals from the LINE-1 IN, LINE-2 IN jacks or DV IN/OUT jack.

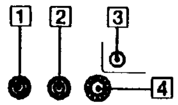
19 **See section C on page 9.**

20 **Remote sensor**

21 **POWER switch**

22 **ON/STANDBY indicator**
Lights green when the power is on. When the power is off, the indicator lights red (DSR-30P) or goes off (DSR-30).

A



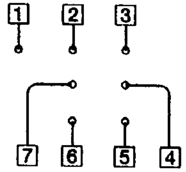
1 **MIC (PLUG IN POWER) jack**
Connect a microphone with a miniplug.

2 **PHONES jack**

3 **CL button (54)**

4 **PHONES LEVEL (headphones volume level) control**

B



1 **⊶ (function lock) indicator**
Lights when the FUNCTION LOCK switch at the rear is set to "ON."

2 **EXT. TIMER REC indicator (33)**
Lights when the EXTERNAL TIMER switch at the rear is set to "REC."

3 **STEREO indicator**
Lights when the VCR is in the stereo mode.

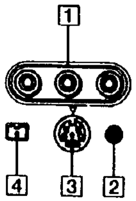
4 **MAIN/L (main/left) indicator**
Lights when the VCR is set to listen to the main sound of a bilingual mode or L-channel sound of the stereo mode.

5 **SUB/R (sub/right) indicator**
Lights when the VCR is set to listen to the sub sound of a bilingual mode or R-channel sound of the stereo mode.

6 **ONE PGM (program) PLAY indicator (32)**
Lights when the VCR plays back a tape in One Program Play mode.

7 **AUTO REPEAT indicator (31)**
Lights when the EXTERNAL TIMER switch at the rear panel is set to "PB [AUTO REPEAT]."

C



1 **LINE-2 IN audio/video input jack (39)**

2 **⊄ LANC jack (38, 39)**

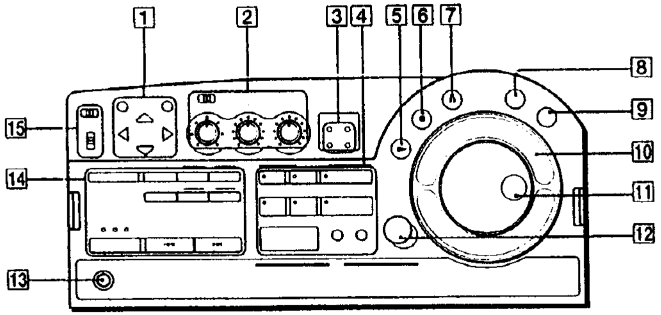
3 **LINE-2 IN S VIDEO input jack (39)**

4 **DV IN/OUT jack (39)**
Use when the equipment connected to the VCR has a DV jack.
If you connect the VCR and the other equipment using DV jacks and the LANC jacks, you can minimize deterioration of picture quality during dubbing, editing or capturing still pictures into a personal computer (IBM PC/AT compatible) by digital processing. For details, refer to the instruction manual of the equipment you use.

(continued)

Main unit (continued)

Operation panel

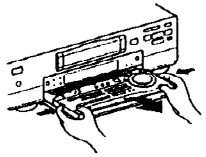


1. See section **D** on page 11.
2. See section **E** on page 11.
3. PCM MODE indicators (49)
4. See section **F** on page 11.
5. ► (play) button
6. ■ (stop) button
7. II (pause) button
8. **PLAYER button (43)**
   When you connect another VCR to the LANC jack, press this button so that you can control the other VCR.
9. **RECORDER button (41)**
   When you connect another VCR to the LANC jack, press this button so that you can control this VCR.
10. **Shuttle ring (25)**
    During playback or pause, use this ring to play back the picture at various speeds. Select the speed you want from among 1/5 (slow), 1, ×2, 10 and 15 (18 for DSR-30P.)
11. **Jog dial (25)**
    During pause, use this dial to play back or search the picture at various speeds. The playback speed changes according to the speed you turn the dial at.
12. **MARK button (43)**
13. **● REC button**
14. See section **G** on page 11.
15. **COMMAND MODE selector (17)**

Detaching the control panel

1 Press OPERATION PANEL OPEN/CLOSE on the front panel.

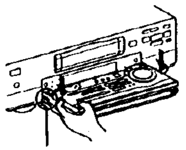
2 While pressing the buttons on both sides of the panel, slightly lift up and slide forward the panel.



Attaching the operation panel

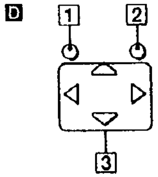
1 Push in the cord into the inner part of the panel tray.

2 Set the panel into the attachment grooves, and push down until the panel clicks.



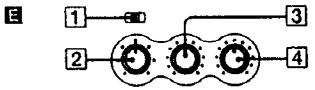
3 Press OPERATION PANEL OPEN/CLOSE.

D



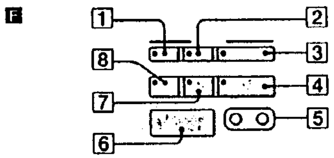
1. **MENU button (20)**
2. **EXECUTE button (20)**
3. **CURSOR (←/↑/↓/→) buttons (20)**

E



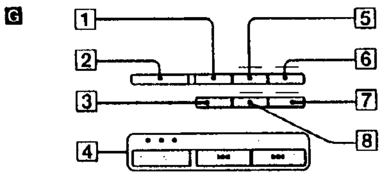
1. **AUDIO MONITOR selector (40)**
   Use to select the audio track you want to hear (stereo 1, stereo 2 or mix) when playing pack a tape recorded in 12bit mode (Fs32k.)
2. **AUDIO MIX BALANCE control (40)**
   When playing back a tape recorded in 12bit mode (Fs32k.), use to adjust the audio balance between the stereo 1 and stereo 2 when you select "MIX."
3. **REC BALANCE control (40)**
   Use to adjust the recording balance (normally, set it to center.)
4. **REC LEVEL control (40)**
   Use to adjust the recording level so that the red indicators of the level meter do not light up.

F



1. **VIDEO INSERT button (45)**
2. **STEREO 1 INSERT button (45)**
3. **STEREO 2 INSERT/AUDIO DUB button (45)**
4. **ASSEMBLE button (43)**
   Press to enter assemble editting mode.
5. **EVENT BACK/FWD buttons (43)**
   Press to select each event in turn in order to change or check events.
6. **START/PAUSE button (41)**
7. **EDIT STANDBY button (41)**
   During synchronized editing, press to make this VCR enter the recording pause mode and make the other VCR enter the playback pause mode. To release the standby mode, press the button again.
8. **DUPLICATE W/TC button (42)**
   Use to duplicate a tape with its time code.

G



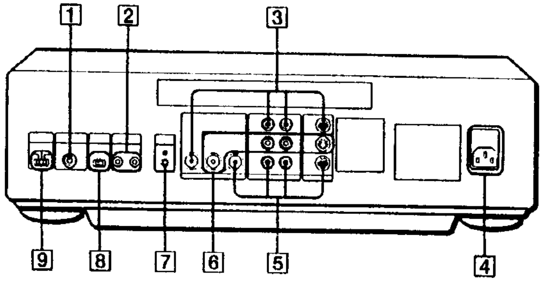
1. **ONE PGM PLAY button (32)**
   Use to play One Program Play on this VCR without connecting an external switch.
2. **INPUT SELECT button (33)**
   Select input from the LINE-1 IN, LINE-2 IN jacks or DV IN/OUT jack.
3. **DISPLAY button (14)**
   Press to display counter information on the monitor screen.
4. **SEARCH SELECT button, indicators and ⏮/⏭ buttons (27)**
5. **AU (audio) MONITOR MAIN/L, SUB/R button**
   When playing back a tape with bilingual sound or stereo sound, or listening to the sound input from the DV IN/OUT jack, press to select the sound you want.

Indicator	**To listen to**	
	Bilingual sound	**Stereo sound**
MAIN/L and SUB/R or STEREO	Both main sound and sub sound	Stereo
MAIN/L	Main sound	Left channel only
SUB/R	Sub sound	Right channel only

6. **DATA CODE button**
   See "Displaying tape information" on page 29.
7. **COUNTER RESET button (14)**
8. **COUNTER SELECT button (14)**

Main unit (continued)

Rear panel



1 **ONE PGM PLAY TRIGGER jack (32)**
For One Program Play, connect an external switch, etc.

2 **CONTROL S IN/OUT jacks**
Connect a wired remote control unit so that you can operate a number of VCRs simultaneously.

3 **LINE-1 IN jack (39)**
To connect a VCR equipped with the S VIDEO OUT jack, use the S VIDEO jack on this VCR.

4 **~ AC IN socket (31)**

5 **LINE-2 OUT jack**
To connect a VCR equipped with the S VIDEO IN jack, use the S VIDEO jack on this VCR.

6 **LINE-1 OUT jack**
To connect a VCR equipped with the S VIDEO IN jack, use the S VIDEO jack on this VCR.

7 **Ȼ LANC jack (38, 39)**

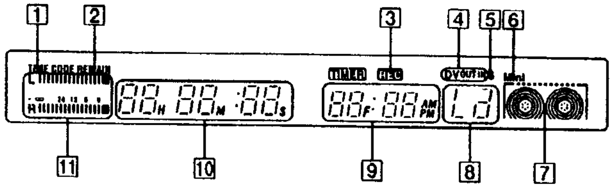
8 **FUNCTION LOCK switch**
To prevent an accidental operation, set the switch to "ON." The buttons on the front panel and operation panel of the main unit will not work.
To lock the buttons on the remote commander and the CONTROL S IN/OUT jacks,
slide the COMMAND MODE selector on the operation panel of the main unit to "OFF'.
You cannot lock the LANC jack.

9 **EXTERNAL TIMER selector**
Use to select External Timer Recording or Auto Repeat.

To record using an external AC timer (33)
Set to "REC." When AC power is supplied to this VCR, recording starts.

To play the VCR in Auto Repeat (AC-ON Repeat) mode (31)
Set to "PB [AUTO REPEAT]". When AC power is supplied to this VCR, a tape rewinds to its beginning automatically and playback starts. When playback finishes, the tape rewinds to its beginning and playback starts again.
The points on the tape where playback stops, are the same as those in One Program Play.

Display window



1 **TIME CODE indicator**
Lights when displaying the time code.

2 **REMAIN (remaining time) indicator**
Lights when displaying the remaining time.

3 **REC (recording) indicator**
Lights during recording, recording pause or external timer recording.
–DSR-30P only–
TIMER and REC light up during internal timer recording. TIMER lights up in the internal timer recording standby mode.

4 **DV OUT/IN indicator**
When you select "DV" using INPUT SELECT, "DV IN" appears in the display window.
While digital signals are being output from the DV IN/OUT jack, "DV OUT" appears.
When you select "DV IN" and digital signals are output from the DV IN/OUT jack, "DV OUT IN" appears.

5 **S (S video) input indicator**
Lights when you select "LINE 1" or "LINE 2" and the S VIDEO jack.

6 **Cassette type indicator**
When you insert a Mini-DVCAM cassette or Mini-DV cassette into the VCR, "Mini" appears.

7 **Tape transport indicator**

8 **INPUT SELECT indicator**

9 **Current time/Frame indicator**

10 **Tape counter indicator**
See "How to check the display window" on page 14.

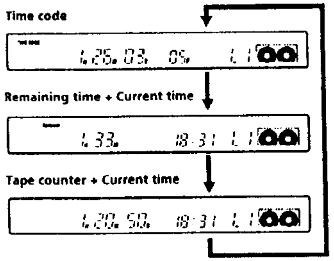
11 **Peak level meter (40)**

(continued)

Main unit (continued)

How to check the display window

Check the TIME CODE and Tape Counter
Each time you press COUNTER SELECT, the indications change as follows: "Time code" → "Remaining time" → "Tape counter"
(Illustration: DSP-30P)


Time code
Remaining time + Current time
Tape counter + Current time

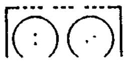
To see the indications on the monitor screen
Press DISPLAY.
Counter indications appear on the monitor screen. If you press the button again, the indications disappear from the screen.

To reset the tape counter to "0H00M00S"
Press COUNTER RESET when tape counter is displayed.
The counter resets to "0H00M00S" whenever a tape is reinserted.

Notes
- The counter stops counting when it comes to a portion with no recording.
- The counter indication may be inaccurate when a tape that has blank portions is rewound or fast-forwarded repeatedly.
- During fast-forward, rewind or search, the tape speed automatically adjusts to the remaining amount of tape. In these cases, the counter or time code indication may stop momentarily.
- Use the remaining time display as an approximate indication. The indication may be inaccurate depending on the tape type.

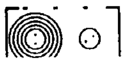
About the tape transport indicator

During a tape loading

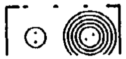


Indicating the remaining time

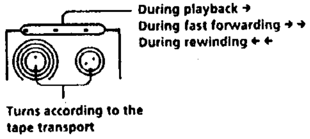
The beginning of the tape



The end of the tape

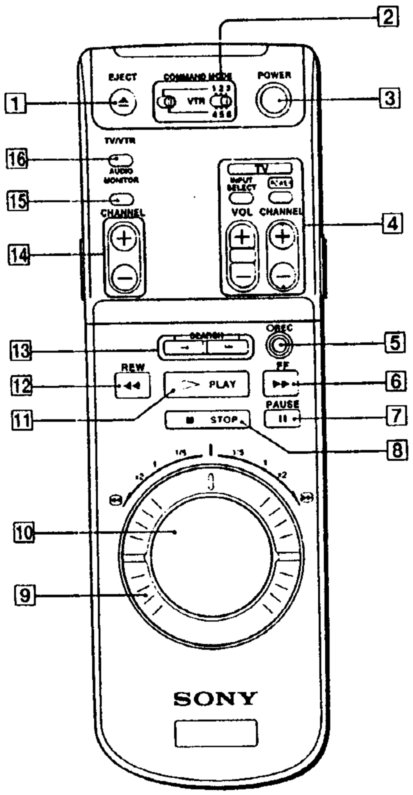


Indicating tape tranport direction and speed


During playback →
During fast forwarding → →
During rewinding ← ←
Turns according to the tape transport

Remote commander

The buttons on the remote commander work as the buttons on the main unit with the same name.

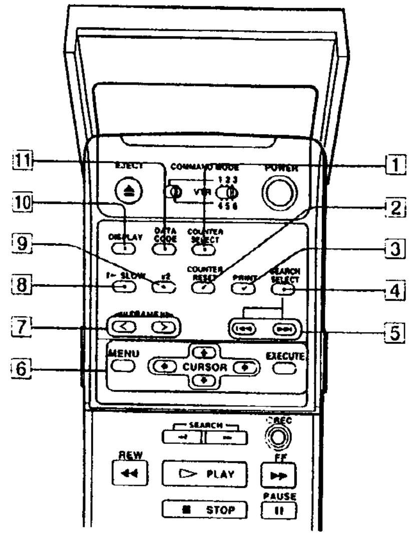

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
EJECT
COMMAND MODE
VTR
POWER
TV/VTR
AUDIO MONITOR
CHANNEL
TV
INPUT SELECT
VOL
CHANNEL
SEARCH
REC
REW
FF
PLAY
STOP
PAUSE
SONY

1 ≜ EJECT button
2 COMMAND MODE selector (17)
3 POWER (ON/STANDBY) button
4 The buttons for monitor or TV operation
  INPUT SELECT button
  Power button
  VOL (volume) +/– buttons
  CHANNEL +/– buttons
  You can use these buttons for aSony monitor/TV with ■ mark.
5 ● REC button
6 ▶▶ FF button
7 ❚❚ PAUSE button
8 ■ STOP button
9 Shuttle ring (25)
10 Jog dial (25)
11 ▷ PLAY button
12 ◀◀ REW button
13 SEARCH ⊖/⊕ buttons (25)
14 CHANNEL +/– buttons
  Use to select input jack.
15 AUDIO MONITOR buttons (11)
16 TV/VCR buttons
  Use to operate a VCR which has a built-in TV tuner.

(continued)

Remote commander
(continued)

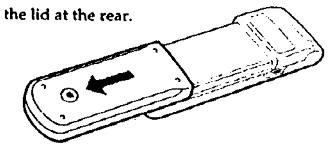
Front with cover opened



1. **COUNTER SELECT button (14)**
2. **COUNTER RESET button (14)**
3. **PRINT button**
   When you connect the LANC connectors of this VCR and a video printer, you can start printing by pressing this button. For details, see the instruction manual of the video printer.
   When you use this PRINT button, set the "LANC MODE" in the SET UP MENU to "S."
4. **SEARCH SELECT button (27)**
5. **SEARCH ⏮/⏭ button (27)**
6. **Buttons for MENU operation (20)**
   MENU button
   CURSOR (←/↑/↓/→) buttons
   EXECUTE button
7. **FRAME ◀II/II▶ buttons (26)**
8. **I▶ SLOW button (26)**
9. ×2 **button (26)**
10. **DISPLAY button (14)**
11. **DATA CODE button (29)**

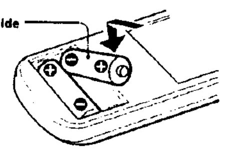
Inserting the batteries

1 Open the lid at the rear.



2 Insert two size AA (R6) batteries.

Match the + and – on the batteries to the diagram inside the battery compartment.



Notes
- With normal use, the batteries should last for approximately three to six months.
- If you will not use the remote commander for an extended period, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery with an old one.
- Do not use different types of batteries together.

Setting the COMMAND MODE selector

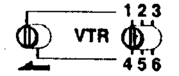
Set COMMAND MODE on the remote commander to the same position as that on the VCR (both switches are set to "VTR4" at the factory.) Change the settings, however, in the following cases:
- If you use two or more Sony VCRs: Change the setting of each VCR in order to prevent accidental operation caused by overlapping of commander signals.
- To control another Sony VCR with the remote commander supplied with this VCR: Set COMMAND MODE on the other VCR to the same position as that on the remote commander supplied with this VCR.
- To control this VCR with the remote commander supplied with the other Sony VCR: Set COMMAND MODE on the remote commander supplied with the other VCR to the same position as that on this VCR.

Tips
- If you set the COMMAND MODE on the operation panel to "OFF," you can no longer control this VCR from any other Sony remote commander.
- If the other Sony VCR does not have a COMMAND MODE switch, use the following settings:
  VTR 1: For Sony Betamax format VCRs
  VTR 2: For Sony 8 mm format VCRs
  VTR 3: For Sony VHS format VCRs

Note
Setting of the COMMAND MODE selector works on the CONTROL S jack as well as the buttons on the remote commander.

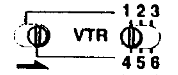
To change the settings of COMMAND MODE on the remote commander

To change to VTR1 – VTR3



Set to the left.

To change to VTR4 – VTR6

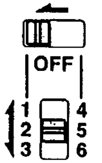


Set to the right.

To change the settings of COMMAND MODE on the VCR

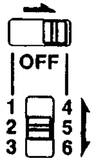
To change to VTR1 – VTR3

Set to the left.



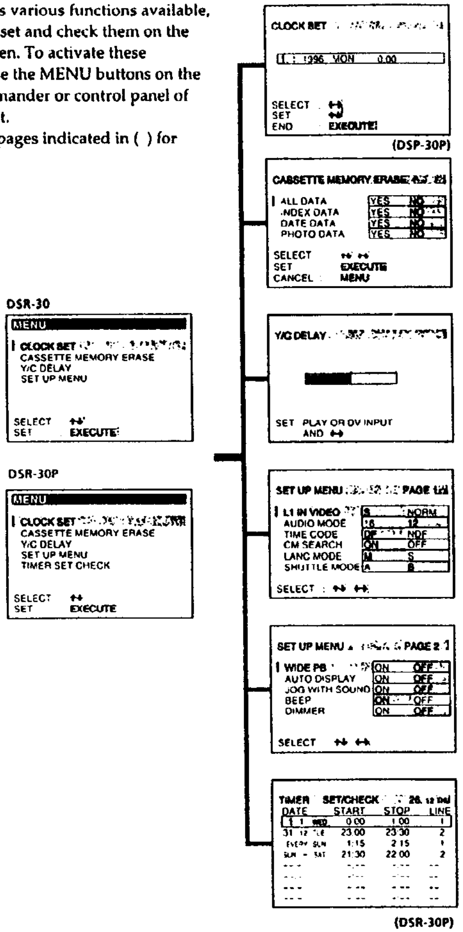
To change to VTR4 – VTR6

Set to the right.



MENU chart

This VCR has various functions available, and you can set and check them on the monitor screen. To activate these functions, use the MENU buttons on the remote commander or control panel of the main unit.
Refer to the pages indicated in ( ) for details.


DSR-30
MENU
CLOCK SET
CASSETTE MEMORY ERASE
Y/C DELAY
SET UP MENU
SELECT
SET EXECUTE
DSR-30P
MENU
CLOCK SET
CASSETTE MEMORY ERASE
Y/C DELAY
SET UP MENU
TIMER SET CHECK
SELECT
SET EXECUTE
CLOCK SET
1. 1. 1996 MON 0.00
SELECT
SET
END EXECUTE
(DSP-30P)
CASSETTE MEMORY ERASE
ALL DATA YES NO
INDEX DATA YES NO
DATE DATA YES NO
PHOTO DATA YES NO
SELECT
SET EXECUTE
CANCEL MENU
Y/C DELAY
SET PLAY OR DV INPUT AND
SET UP MENU PAGE 1/2
L1 IN VIDEO S NORM
AUDIO MODE 16 12
TIME CODE DF NDF
CM SEARCH ON OFF
LANC MODE M S
SHUTTLE MODE A B
SELECT
SET UP MENU PAGE 2
WIDE PB ON OFF
AUTO DISPLAY ON OFF
JOG WITH SOUND ON OFF
BEEP ON OFF
DIMMER ON OFF
SELECT
TIMER SET/CHECK
DATE START STOP LINE
1 1 WED 0:00 1:00 1
31 12 TUE 23:00 23:30 2
EVERY SUN 1:15 2:15 1
SUN - SAT 21:30 22:00 2
(DSR-30P)

CLOCK SET (19)
Setting the date and time.

CASSETTE MEMORY ERASE (24)
Erasing the contents of the cassette memory of the DV or Mini DV tape.

Y/C DELAY (23)
Adjusting the picture delay between luiminance and chrominance.

SET UP MENU PAGE 1 (21)

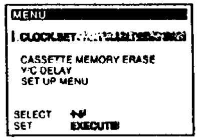
SET UP MENU PAGE 2 (22)

TIMER SET/CHECK (34)
(DSR-30P only)
Setting timer recordings.
You can also check, change and cancel the recordings.

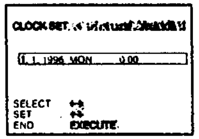
Setting the clock

Before starting operation, set the clock on the "CLOCK SET" screen. The Date and time are recorded on the tape, and you can check them by displaying them during playback.

1 **Press MENU.**
The main MENU appears on the monitor screen.

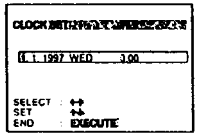

MENU
CLOCK SET
CASSETTE MEMORY ERASE
Y/C DELAY
SET UP MENU
SELECT
SET EXECUTE

2 **Press the CURSOR (↑/↓) buttons to move the cursor (▮) to CLOCK SET, then press EXECUTE.**


CLOCK SET
1. 1. 1996 MON 0.00
SELECT
SET
END EXECUTE

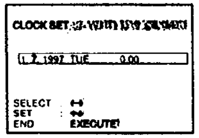
(DSR-30P)

3 **Set the date using the CURSOR (↑/↓) buttons.**
For DSR-30: Set the month first. The date is shown on the screen in the order of month/day/year.


CLOCK SET
1. 1. 1997 WED 0.00
SELECT
SET
END EXECUTE

(DSR-30P)

4 **Press CURSOR → to highlight the month and set the month using the CURSOR (↑/↓) buttons.**
For DSR-30: Set the day.


CLOCK SET
1. 2. 1997 TUE 0.00
SELECT
SET
END EXECUTE

(DSR-30P)

5 **Repeat step 4 to set the year, and then the hour and the minutes.**

6 **Press EXECUTE to start the clock.**
The CLOCK SET menu disappears from the screen.

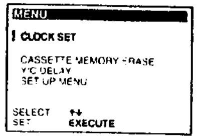
Tip
Even if you disconnect the AC power cord or suspension of power occurs, the clock works for about 30 minutes.

(continued)

Changing menu options

You can change the menu settings on the SET UP MENU screen. If necessary, change the settings manually during editing, etc.

1 **Press MENU.**
The main MENU appears on the monitor screen.

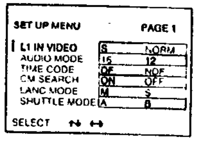

MENU
CLOCK SET
CASSETTE MEMORY ERASE
Y/C DELAY
SET UP MENU
SELECT ↑↓
SET EXECUTE

2 **Press the CURSOR (↑/↓) buttons to move the cursor (▮) to SET UP MENU*, then press EXECUTE.**

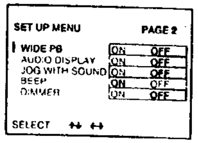
* To select SET UP MENU PAGE 2, press ↓ at the lowest line of the SET UP MENU PAGE 1.

** DSR-30P does not have a TIME CODE setting on the SET UP MENU PAGE 1.

SET UP MENU PAGE 1 (DSR-30**)


SET UP MENU PAGE 1
L1 IN VIDEO S NORM
AUDIO MODE 16 12
TIME CODE DF NDF
CM SEARCH ON OFF
LANC MODE M S
SHUTTLE MODE A B
SELECT ↑↓ ←→

SET UP MENU PAGE 2


SET UP MENU PAGE 2
WIDE PB ON OFF
AUDIO DISPLAY ON OFF
JOG WITH SOUND ON OFF
BEEP ON OFF
DIMMER ON OFF
SELECT ↑↓ ←→

3 **Press the CURSOR (↑/↓) buttons to move the cursor (▮) to the option you want to change and press CURSOR (←/→) buttons to change the setting.**
The contents of each menu are shown on pages 21 and 22.

4 **Press EXECUTE.**
The menu disappears from the monitor screen.

Note
Menu settings are held even after the VCR is disconnected from the AC power source.

Menu choices

Initial settings are indicated in bold letters.

PAGE 1

Menu option	Set this option to
L1 IN VIDEO	• **S** to select the S video signal when both the S video and video jacks are connected. The video signal is selected automatically when only the video jack is connected. • NORM to select the video signal when both the S video and video jacks are connected. (When you use the S video picture, make sure to set to "S.")
AUDIO MODE	• 16 to record the audio from the LINE-1 IN/LINE-2 IN jacks in 16bit (Fs48k) recording mode. You can record higher-quality sound. • **12** to record the audio from the LINE-1 IN/LINE-2 IN jacks in 12bit (Fs32k) recording mode. You can record the audio on 2 tracks, STEREO 1 and STEREO 2. (The audio from the DV IN connector is recorded in the same audio recording mode as the source tape.)
TIME CODE (DSR-30 only)	• **DF** to set the time code to Drop Frame. • NDF to set the time code to Non Drop Frame.
CM (Cassette Memory) SEARCH	• **ON** to search recordings with the cassette memory. If the tape does not have a cassette memory, the VCR will search recordings using index signals recorded on the tape itself. • OFF to search recordings using the index signals recorded on the tape.
LANC MODE	• **M** to control another VCR from this VCR using the Ⓛ LANC connection. • S to control this VCR from another equipment using the Ⓛ LANC connection. (When you connect a video printer and use the PRINT button on the remote commander supplied with this VCR, set LANC MODE to "S.")
SHUTTLE MODE	• A to control, via the Ⓛ LANC connection, a VCR that doesn't have a reverse slow motion function. • **B** to control, via the Ⓛ LANC connection, a VCR that has a reverse slow motion function.

(continued)

Changing menu options
(continued)

PAGE 2

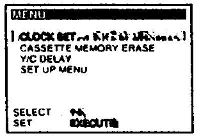
Menu option	Set this option to
WIDE PB (DSR-30P: See SET UP MENU PAGE 1.)	• ON to display a picture recorded in wide mode (16:9) on a standard monitor (4:3). DSR-30: Black bands appear at the top and the bottom of the screen and the screen looks wide. DSR-30P: Black band appears at the bottom of the screen and the screen looks wide. • OFF to display a picture recorded in wide mode (16:9) on a wide-screen TV (16:9).
AUTO DISPLAY	• ON to display the tape transport indicators (▶, ▶▶, etc.) on the monitor screen. The indicators disappear from the screen automatically after about 3 seconds. • OFF not to display the tape transport indicators of the VCR on the screen. When you use this VCR as a player during editing, set to "OFF" so that you can prevent the tape transport indicators from being recorded on the recorder VCR.
JOG WITH SOUND	• ON to listen to the sound when playing the tape frame-by-frame or at a slower speed than normal. • OFF to turn off the sound.
BEEP	• ON to output a beep sound when an illogical operation is made. • OFF to deactivate it.
DIMMER	• ON to make the display window dim. • OFF to make it brighter.

Adjusting the picture color (Y/C delay)

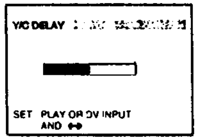
When playing back a source recorded from an analog VCR, the color of the picture may shift right or left.
You can adjust this color shift by using the Y/C delay function.
Y/C delay function is for adjusting the picture delay between luminance and chrominance.

1 During playback or pause or when the DV input picture is displayed, press MENU.

2 Press the CURSOR (↑/↓) buttons to move the cursor (▮) to Y/C DELAY, then press EXECUTE.



3 Press the CURSOR (←/→) buttons to correct the color shift of the picture.



4 Press EXECUTE.
The menu disappears from the monitor screen.

Tips

- Video signals are composed of Y (luminance) and C (chrominance) signals. The Y/C delay function adjusts the time lag between the Y and C signals.
- You cannot record the adjusted picture.

Erasing the cassette memory

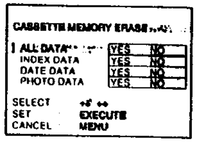
Notes

- You cannot erase the cassette memory while the safety switch on the cassette is slid to show red.
- This VCR can retrieve up to 16 kbits of data.
  If the cassette memory is larger than 16 kbits, you can select ALL DATA only.

Some Standard-DVCAM cassettes and Mini -DVCAM cassettes have cassette memories (CM mark) where data such as recorded date and time is stored. If you don't need the stored data, erase the memory using the following procedure.

1 **Press MENU.**
The main MENU appears on the monitor screen.

2 **Press the CURSOR (↑/↓) buttons to move the CURSOR (▮) to CASSETTE MEMORY ERASE, then press EXECUTE.**



CASSETTE MEMORY ERASE

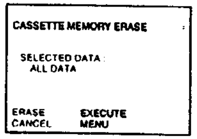
▮ ALL DATA	YES	NO
INDEX DATA	YES	NO
DATE DATA	YES	NO
PHOTO DATA	YES	NO

SELECT ↑↓ ←→
SET EXECUTE
CANCEL MENU

3 **Press the CURSOR (↑/↓) buttons to select the data to erase, then press CURSOR (←/→) to set it to YES.**

Select	**To erase**
ALL DATA	The entire memory
INDEX DATA	Signals for INDEX SEARCH
DATE DATA	Signals for DATE SEARCH
PHOTO DATA	Signals for PHOTO SEARCH

4 **Press EXECUTE.**
A message appears to confirm the operation.



CASSETTE MEMORY ERASE

SELECTED DATA :
ALL DATA

ERASE EXECUTE
CANCEL MENU

5 **Press EXECUTE.**
The data you selected is erased, then the VCR returns to the original screen.

Playing at various speeds

Using shuttle ring

Playback options	**Operation**
Play at various speeds	During playback or pause: Turn the shuttle ring and hold it at the speed you want. If you release the ring, the VCR returns to playback pause mode. • 1/5: 1/5 of normal speed • 1: normal speed • ×2: double speed • ⏪/⏩: approximately 10 or 15 (18 for DSR-30P) times normal speed The VCR switches between the two speeds as you turn the shuttle ring.
Fast-forward/rewind*	During stop: Turn the shuttle ring on the VCR to ◀◀ or ▶▶ and release. Turn the shuttle ring to ◀◀ or ▶▶ again to view the picture during fast-forward or rewind.*

* This feature is not available when using a remote commander or when controlling another VCR from this VCR.

Using jog dial

During pause, turn the jog dial to play the picture at a speed slower than normal speed. This feature is useful for locating a specific point on the tape.

Rewinding the tape and starting playback automatically (Auto Play)

Press ▶ while pressing ◀◀ on the main unit.
The tape rewinds to the beginning, then starts playing automatically.

(Continued)

Using buttons on the remote commander

Playback options	Operation
Play at twice the normal speed	During playback, press ×2. To change direction, press FRAME ◀II or II▶.
Viewing a high-speed picture	During playback, press ◀◀ or ▶▶.
Play in slow motion	During playback or pause, press I▶ SLOW. To change direction, press FRAME ◀II or II▶.
Play frame by frame	During pause, press FRAME ◀II or II▶.

To resume normal playback

Press ▷PLAY.

To hear the sound during slow motion and frame-by-frame

If you want to hear the sound during slow motion and frame-by-frame, set "JOG WITH SOUND" in the SET UP MENU to "ON."

Searching using the index function

Tips

- If you use a tape with CM16K mark, the cassette memory stores up to 135 index signals. (The number changes depending on the memory size combination of index, date, and photo data stored on a tape.) This VCR is capable of storing and retrieving up to 16 kbits of cassette memory.
- To locate recordings whose signals are disabled to be stored in the cassette memory, or to locate recordings in order of their position on the tape, set "CM SEARCH" to "OFF" in the SET UP MENU. You can use the same procedure to search for a recording on a tape without cassette memory.

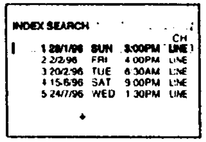
Three kinds of search are available on this VCR:

- Searching for the beginnings of recordings: Index search
- Searching for a point on the tape where the recorded date changes: Date search
- Searching for scenes recorded in the photo mode with a digital camcorder: Photo search

Searching in the list

If the tape has a cassette memory, the recordings are listed in the chronologically in the order they were made. You can search using this chronological list.
If the tape does not have a cassette memory, you cannot search for scenes in the chronological order.

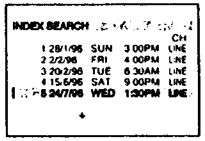
1 Press SEARCH SELECT to select the search type: INDEX, DATE or PHOTO SEARCH.
The indicator of the search type you selected lights.
The chronological list appears on the monitor screen.



INDEX SEARCH
CH
1 28/1/96 SUN 3:00PM LINE
2 2/2/96 FRI 4:00PM LINE
3 20/2/96 TUE 6:30AM LINE
4 15/6/96 SAT 9:00PM LINE
5 24/7/96 WED 1:30PM LINE

(Illustration: DSP-30P)

2 Press |◀◀ or ▶▶| to select a recording.
The VCR starts searching and when it locates the recording, begins playback. During Photo search, the VCR pauses.



INDEX SEARCH
CH
1 28/1/96 SUN 3:00PM LINE
2 2/2/96 FRI 4:00PM LINE
3 20/2/96 TUE 6:30AM LINE
4 15/6/96 SAT 9:00PM LINE
5 24/7/96 WED 1:30PM LINE

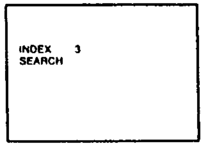
(Illustration: DSP-30P)

Searching in the order of the actual positions of the recordings on the tape

When you use a tape without a cassette memory, the VCR searches in the order of the actual positions of the recordings, regardless of the setting of "CM SEARCH" in the menu.
When you use a tape with a cassette memory, set "CM SEARCH" in the SET UP MENU to "OFF."

1 Press SEARCH SELECT to select the search type.
The indicator of the search type you selected lights.

2 Press |◀◀ or ▶▶| repeatedly to locate the recording you want.
The VCR starts searching backwards or forwards until the index number comes to zero, then plays back the recording. During Photo search, the VCR pauses.



INDEX 3
SEARCH

(Continued)

Searching using the index function (continued)

Note
This VCR is not compatible with "CLIP LINK."

How signals are recorded
The VCR marks the tape when:
- ● REC is pressed.
- Recording is resumed after changing the program position during recording pause (DSR-30P only.)
- Timer recording starts (DSR-30P only.)

There are three different signals for each search method. The type of signal recorded and where it is recorded (on the sub code sector of the tape or in the cassette memory) depends on the video equipment used for recording. Please note that if the signals for certain search type are not recorded, you cannot do that type of search.

When you record with a Sony digital camcorder (DSR-200/200P)

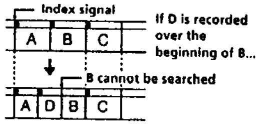
Signals for	In cassette memory	On tape
Index search	No	No
Date search	Yes	Yes
Photo search	Yes	Yes

When you record on this VCR

Signals for	In cassette memory	On tape
Index search*	Yes	Yes
Date search	No	Yes
Photo search	No	No

* The signals for Index search are recorded when you start recording for the first time in stop mode.

About the index signal
- Each program is indexed at its beginning. If you record another program over the beginning of the first program, you will not be able to locatethe original program.



- You cannot add indexes only after recording.
  To add indexes only for Auto Repeat or One Program Play, start recording from the point you want to start indexing.
- You cannot erase indexes after recording.
  To delete indexes for Auto Repeat or One Program Play, start video insert from the point you want to erase indexes.
- Searching may not be done correctly if the signals were not recorded on a Sony-brand digital video equipment.

Displaying tape information

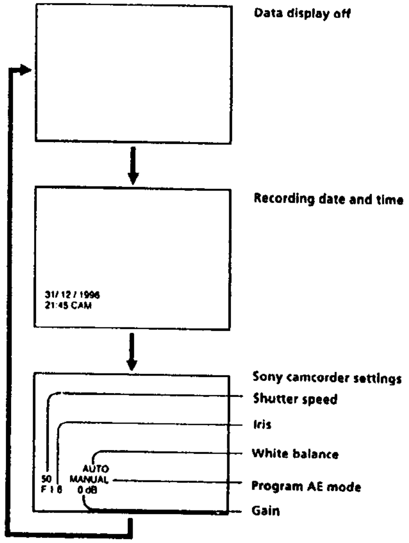
Tip
When the information was not recorded, "---" appears instead.

Notes
- The camcorder data displayed on the monitor screen by this VCR are partially different from those shown by the digital camcorder.
- You cannot see the "CLIP LINK" information on this VCR.

If you record a tape using a Sony digital camcorder DSR-200/200P, camcorder data (the shutter speed, program AE mode, white balance, iris and gain) can be recorded on the tape. You can check these data during playback on this VCR.

Press DATA CODE during playback.
Each time you press DATA CODE, the display changes as follows.

(Illustration: DSP-30P)



Watching wide pictures

Notes

- This VCR can detect Wide-ID-1/ID-2 signals input from the LINE-1 IN/LINE-2 IN signals. It cannot detect S1/S2 signals or EDTVII discrimination control signals.
- For operation of the wide-screen TV, refer to the instruction manual of the TV.

You can play wide pictures recorded on this VCR or on the DSR-200/200P digital camcorder in wide mode automatically.

Recording wide pictures

If this VCR receives the WIDE-ID signals from the LINE-1 IN/LINE-2 IN jacks or DV IN connector, this VCR can record pictures in wide mode. The WIDE indicator on the front panel lights when the VCR detects input of WIDE-ID signals.

About WIDE-ID signals

There are two systems:

ID-1: Makes wide signals overlap on the V-blanking part of the video signals.

ID-2: Adds copyright protection signals to the ID-1 system.

Playing back wide pictures

To watch on a 4:3 monitor screen

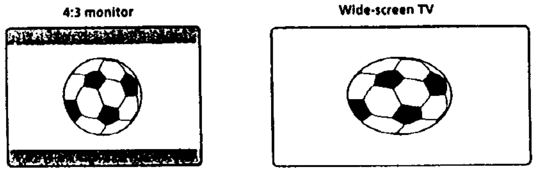
Set "WIDE PB" to "ON" on the SET UP MENU of this VCR. Black bands appear at the top and the bottom (for DSR-30P, bottom only) of the screen and the screen looks wide (CINEMA mode.)

To watch on a wide-screen TV

Set "WIDE PB" to "OFF" on the SET UP MENU of this VCR, and set the wide-screen TV to "16:9 FULL mode."

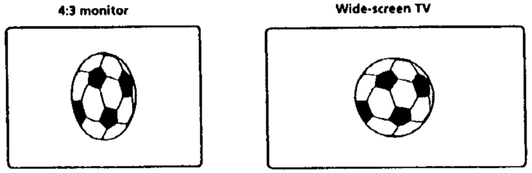
In the case of a wide-screen TV compatible with the Video-ID on the wide screen system, it enters into the FULL mode automatically.

When "WIDE PB" is set to "ON"



(Illustration: DSR-30)

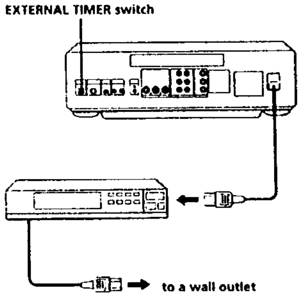
When "WIDE PB" is set to "OFF"



Auto Repeat

Note

The VCR cannot search for an index or unrecorded portion within 20 seconds from the beginning of the tape.



Caution

While a tape is running, do not turn off the power, using an AC timer. The VCR and a tape may be damaged. When turning off the power of the VCR, make sure to press ■ on this VCR first to stop the tape transport, then turn off the power.

This VCR can repeat the playback of all or part of the tape automatically.

1 **Set the EXTERNAL TIMER switch at the rear of the main unit to "PB [AUTO REPEAT]."**
The AUTO REPEAT indicator on the front panel lights.

2 **Press ►.**
Playback starts automatically. The VCR repeats the playback from the beginning to the first index (if there is no index on the tape, to the unrecorded portion; if no unrecorded portion, to the tape end).

Auto Repeat using an external AC timer

If you connect an external AC timer (not supplied) to this VCR, you can repeat playback automatically at the preset time.

1 **Connect an external AC timer (not supplied) to this VCR.**

2 **Set the EXTERNAL TIMER switch at the rear of the main unit to "PB [AUTO REPEAT]."**
The AUTO REPEAT indicator on the front panel lights.

3 **Set the timer-on time on the external AC timer.**
At the preset time, the power turns on, and after a few 30 seconds (no more than 30), Auto Repeat playback starts automatically.

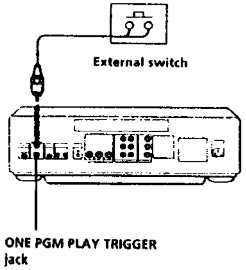
To stop Auto Repeat

Press ■.

To release Auto Repeat mode

Set the EXTERNAL TIMER switch to "OFF."

One Program Play



Tip
About trigger signals:
In the case of an external switch, short-circuit between hot and ground conductor of the ONE PGM PLAY TRIGGER jack.
If you connect an external circuit, short-circuit using a circuit relay or an open collector.

Caution
While a tape is running, do not turn off the power, using an AC timer. The VCR and a tape may be damaged. When turning off the power of the VCR, make sure to press ■ on this VCR first to stop the tape transport, then turn off the power.

Note
The VCR cannot locate an index or unrecorded portion within 20 seconds from the beginning of the tape.

After playing back all or part of the tape, this VCR can rewind the tape to the beginning and stop playback automatically (One Program Play.)

Using an external switch

Connection
Connect an external switch to the ONE PGM PLAY TRIGGER jack at the rear of the main unit.

Operation

1 **Turn on the power of this VCR.**

2 **Press the external switch.**
The ONE PGM PLAY indicator on the front panel lights.
The tape rewinds to the beginning automatically, then playback starts. After playback stops, the tape rewinds to the beginning automatically and stops.

Using the ONE PGM PLAY button on this VCR

Use the ONE PGM PLAY button when you check the operation during Auto Repeat and One Program Play.

1 **Turn on the power of this VCR.**

2 **Press the ONE PGM PLAY button on the operation panel.**
The ONE PGM PLAY indicator on the front panel lights.
The tape rewinds to the beginning automatically, then playback starts. After playback stops, the tape rewinds to the beginning automatically and stops.

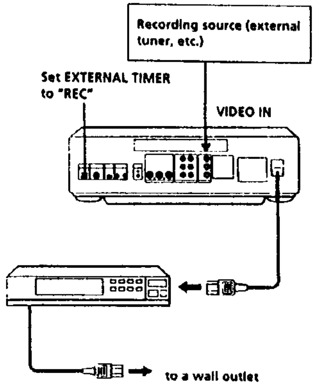
The point where the tape stops playback

The VCR plays back the tape from the beginning to the first index (if there is no index on the tape, to the unrecorded portion; if none, to the tape end), and stops. Then the tape rewinds to the beginning. (The point where the tape stops is the same as the turning point of the Auto Repeat play.)

To release One Program Play

Press ■ STOP.

AC timer recording


Recording source (external tuner, etc.)
Set EXTERNAL TIMER to "REC"
VIDEO IN
to a wall outlet

Note
In case recording is impossible because the safety switch on the cassette is slid to red, the cassette is ejected when the power turns on at a preset time.

By connecting this VCR to an external AC timer (not supplied), you can start recording at a preset time.

1 **Connect this VCR to an external AC timer (not supplied).**

2 **Insert a blank tape.**

3 **Press INPUT SELECT to select the recording source.**

4 **Set the timer-on time on the connected AC timer.**
At the preset time, the power of this VCR and the recording source turn on automatically and recording starts about several to 10 seconds later. Set the timer allowing a margin for the recording to start.

5 **Set the EXTERNAL TIMER switch at the rear to "REC."**
You need not press ● REC.

If the tape ends before the recording source stops operation
The tape stops without rewinding.

To stop recording durng the timer recording
Press ■ STOP.

To release AC timer recording
Set the EXTERNAL TIMER switch to "OFF."

Caution
While a tape is running, do not turn off the power using an AC timer. The VCR and a tape may be damaged. When turning off the power of the VCR, make sure to press ■ on this VCR first to stop the tape, then turn off the power.

Setting the timer

(DSR-30P only)

Tip

To change or correct a setting before confirming it, press CURSOR ← to highlight the item you want to change and reset it.

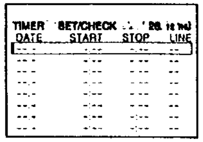
Notes

- "TIMER" and the cassette mark flashes in the display window when you press POWER with no tape inserted.
- If you record a program that is encoded with copyright protection signals, the VCR will continue recording but the video and audio signals will not be recorded on tape.
- You cannot record signals from the DV IN jack with the timer.

Before you start...

- Check that the clock is set to the correct time.
- Insert a tape with its protect tab not slid to red. Make sure the tape is longer than the total recording time.
- Turn on your monitor and set it to the video input.

1 Press MENU. Press CURSOR ↑/↓ to move the cursor (▮) to TIMER SET/CHECK, then press EXECUTE.



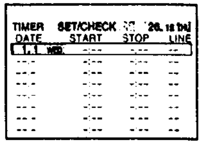
TIMER SET/CHECK		26. 12 THU	
DATE	START	STOP	LINE
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--

2 Set the date, start and stop times, and programme position:

1. Press CURSOR → to highlight each item in turn.
2. Press CURSOR (↑/↓) to set each item.

To correct a setting, press CURSOR ← to return to that setting and reset.

To record a source connected to one of the inputs, select 1 or 2 in the "LINE" position.

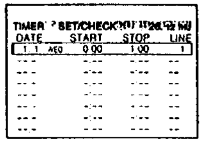


TIMER SET/CHECK		26. 12 THU	
DATE	START	STOP	LINE
1. 1 WED	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--

3 Press CURSOR → to confirm the setting.

The cursor (▮) appears in the leftmost column.

To preset another timer setting, move the cursor to the next line and repeat step **2**.



TIMER SET/CHECK		26. 12 THU	
DATE	START	STOP	LINE
1. 1 WED	0:00	1:00	1
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--

4 Press EXECUTE.

5 Press POWER to turn off the VCR.

"TIMER" appears in the display window and the VCR stands by for recording.

Leave the connected equipment (recording source) switched on.

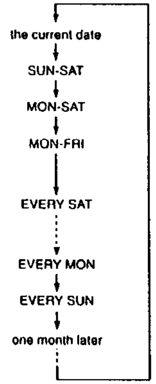
To stop recording

To stop the VCR while recording, press ■ STOP.

Daily/weekly recording

When you set the date to start recording in step **2**, press CURSOR ↓ to select the recording pattern. Each time you press the button, the indication changes as shown on the left.

Daily/weekly recording



SUN-SAT	**(from Sunday to Saturday)**
MON-SAT	**(from Monday to Saturday)**
MON-FRI	**(from Monday to Friday)**
EVERY SAT	**(every Saturday)**
EVERY MON	**(every Monday)**
EVERY SUN	**(every Sunday)**

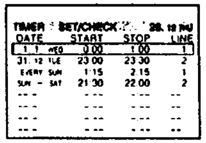
Checking/changing/cancelling timer settings (DSR-30P only)

Before you start...

Turn on your monitor and set it to the video channel.

1 Press POWER to turn on the VCR.

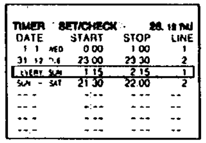
2 Press MENU and select TIMER SET/CHECK, then press EXECUTE.



TIMER SET/CHECK		26. 12 THU	
DATE	START	STOP	LINE
1. 1 WED	0:00	1:00	1
31. 12 TUE	23:00	23:30	2
EVERY SUN	1:15	2:15	1
SUN - SAT	21:30	22:00	2
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--

3 Check the timer settings:

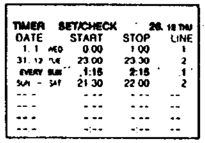
- If you do not want to change or cancel the settings, press EXECUTE, then turn the VCR off to return to recording standby.
- If you want to change or cancel the settings, press the CURSOR (↑/↓) buttons to move the cursor (▮) to the setting you want to change or cancel.



TIMER SET/CHECK		26. 12 THU	
DATE	START	STOP	LINE
1. 1 WED	0:00	1:00	1
31. 12 TUE	23:00	23:30	2
EVERY SUN	1:15	2:15	1
SUN - SAT	21:30	22:00	2
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--

4 Change or cancel the timer setting:

- To change the setting, press the CURSOR (←/→) buttons to highlight the item you want to change, and reset it using the CURSOR (↑/↓) buttons. Then, press CURSOR → to move the cursor to the leftmost column.
- To cancel the setting, press the CURSOR (←/→) buttons to highlight the start time of the item you want to cancel, and reset it to any time before the current time using the CURSOR (↑/↓) buttons.



TIMER SET/CHECK		26. 12 THU	
DATE	START	STOP	LINE
1. 1 WED	0:00	1:00	1
31. 12 TUE	23:00	23:30	2
EVERY SUN	1:15	2:15	1
SUN - SAT	21:30	22:00	2
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--
--.-	-:--	-:--	--

5 Press EXECUTE.

If any settings remain, turn off the VCR to return to recording standby.

Editing methods

Editing methods available with this VCR

You can use the following types of editing on this VCR.
If you use this VCR as a playback VCR, see page 40.
Make sure to use a Standard-DVCAM cassette or Mini-DVCAM cassette for recording.

Synchronized editing

You can synchronize starting and pausing of recording on this VCR (recorder) and starting and pausing of playback on another VCR (player). You need a VCR equipped with a LANC jack for this editing.

Duplicating a tape

You can copy the same time codes recorded on another VCR (player) onto this VCR (recorder). This function is enabled when the source tape is DVCAM formatted and you make DV connections. If you copy a source tape using this function, you can make a work tape having the same time codes as the source tape. The contents of the cassette memory are not copied. You need a DVCAM VCR equipped with a DV output jack and LANC jack.

Assemble editing

You can edit up to 10 events at a time automatically. To use this function, you need a VCR equipped with a LANC jack.

Video/Audio insert

With 12bit mode (Fs32k), you can select the track, stereo 1 or 2, to be replaced. You can execute video insert and audio insert editing at the same time.

If you use a VCR (player) equipped with a LANC jack, you can synchronize the start of insert on this VCR (recorder) with the start of playback on another VCR (player.) At the time of video insert editing, a part of sub code data are replaced simultaneously.

Note

If you insert the sound on the stereo 2 track of the picture under the following conditions, the inserted sound will be muted even if you select to listen to both stereo 1 and stereo 2 sounds: You make the player VCR enter the playback pause mode, or slow or high-speed playback, and then record that picture on this VCR with the DV connection.

Audio recording mode

- In the DVCAM format, the sound is recorded in either 16bit (Fs48k) or 12bit (Fs32k) mode.
  - The 16bit (Fs48k) mode uses the whole audio area to record one stereo track. You can get higher sound quality.
  - The 12bit (Fs32k) mode separates the audio area into 2 parts. You can record two kinds of audio, stereo 1 and stereo 2.
- The audio recording mode of the tape is shown by the PCM MODE indicators on the operation panel. (page 49)
  - The audio recording mode is decided as follows:
    When recording from the DV jack: the sound is recorded in the same audio mode as the source tape.
  - When recording from the LINE IN connectors: you can select the audio mode by setting AUDIO MODE in the SET UP MENU. (page 21)

About DV connection, etc.

DV connection

The DV jack transmits video and audio signals in digital form.
The video and audio signals are sent with hardly any degradation, enabling high-quality editing. The signal flow is automatically detected so you need not make separate connections for input and output.

- The DV jack of this VCR outputs playback video and audio signals only. Signals from the VCR's line inputs are not output from the DV jack.
- With the DV connection, the sound is recorded in the same audio recording mode as that of the source tape. To record in a different audio recording mode from the source tape, use the LINE connection instead.
- With the DV connection, tape information (recording date, camcorder data, etc.) recorded on the source tape is transmitted from the other VCR (player). As a result, when you play back a recorded tape and press DATA CODE, the same tape information recorded on the source tape is displayed on the monitor screen. However, contents of the cassette memory are not transmitted. In addition, the time code is newly recorded on the tape on this VCR, except when copying a tape in Duplicate mode.
- The functions working during playback such as on-screen display and Wide PB cannot be transmitted with the DV connection. To enable such a function, use the LINE connection.

(continued)

Editing methods (continued)

Tips
- If the other VCR has a LANC jack of 5-pin DIN type, connect with the VK-810 Control L connecting cable (not supplied).
- The jacks labeled CONTROL L or REMOTE have the same function as LANC jacks.

Notes
- The VCR (recorder) receives the time code data from the LANC jack only when the other VCR (player) is set to show the time code indications.
- If this VCR cannot control the other VCR, check the settings of "LANC MODE" and "SHUTTLE MODE" on both VCRs.

LANC jack

- When you connect the LANC jacks on this VCR and the other VCR, this VCR can control the other VCR (player.) You can switch the VCR you can control, using the PLAYER button and the RECORDER button on the operation panel.
- The LANC connection transmits signals such as control signals, time code and time counter data and status data.
- When connecting VCRs with the LANC cable, you need to set the LANC mode for each VCR, using the menu or switch.
  - On the VCR that controls the other VCR: set LANC mode to "M".
  - On the VCR to be controlled from the other equipment: set LANC mode to "S".

  In the case of a camcorder that does not have a LANC mode switch or a LANC mode menu, LANC mode is usually set to "S".

Time code

- On this VCR, time codes are recorded automatically during recording. To check the time code, press COUNTER SELECT until the time code appears in the display window.
- This VCR can cope with both DF (Drop Frame) and NDF (Non Drop Frame). Change the "TIME CODE" setting on the SET UP MENU, if necessary. (page 21) (DSR-30 only)

Drop frame mode

The time code runs at 30 frames/second, while the NTSC color television system runs at about 29.97 frames/second. This means that a length of 1 hour as indicated by time code is longer than the actual clock time of 1 hour. Drop frame mode eliminates this discrepancy. It adjusts the running of time code by dropping two frames from the time code value at the beginning of each minute except every tenth minute.

Non drop frame mode

Non drop frame mode ignores the difference between the time code and the actual clock time. This mode is also called "Full frame mode" or "Normal frame mode." Since it does not drop the frames, a length of 1 day as indicated by time code is longer than the actual clock time by about 86 seconds. It is not recommended to use this mode when you edit the tape by deciding the time of the program by second, as it is based on the actual frame number of the time code.

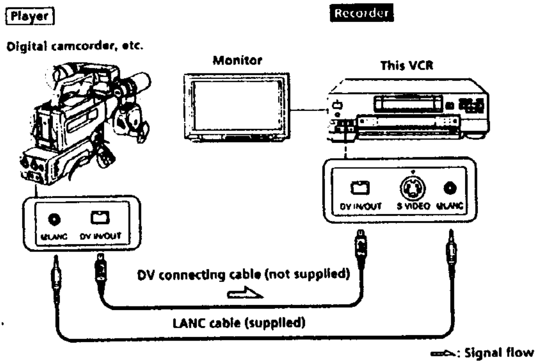
- On this VCR, the time code is recorded sequently from "0H00M00S00F," from the beginning of the tape. However, if there is a blank section on the tape, time code is reset and recorded from "0H00M00S00F" again from the section just after the blank section. When you duplicate a tape using the DUPLICATE W/TC (Duplicate with Time Code) button on the operation panel, the same time codes recorded on the other VCR (player) are recorded on the tape.
- If the time codes are out of sequence, you may not be able to execute correct editing.

Connections and preparation

Note
If you connect both LANC jacks on the front and rear panel, the front one is selected.

To digital video equipment with DV connector

With this connection, you can edit tapes with high-quality video and audio.

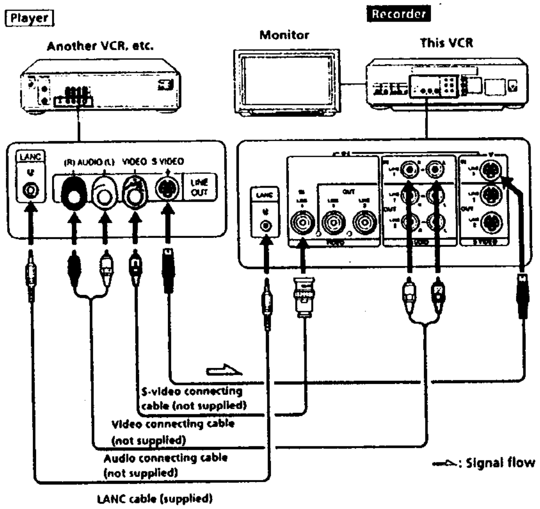


Notes
- When you connect output jacks of the recorder to input jacks of the player VCR, select the input correctly to prevent a humming noise.
- If you connect cables to both audio/video jacks and S VIDEO connector of LINE-1 IN/LINE-2 IN, signals from the S VIDEO jack is selected. ("S" lights in the display window.)
  To select signals from the LINE-1 IN video jack, set "L1 IN VIDEO" in the SET UP MENU to "NORM." To give priority to signals from the LINE-2 IN video jack, disconnect any cable from the S VIDEO jack on this VCR.
- Distorted signals (e.g., when played back at a speed other than normal) will not be recorded properly.

Tip
To connect a monaural VCR, use LINE-2 IN jack and connect to the L jack (white) (leave the red audio plug unconnected).
The monaural audio from the L jack will be recorded on both left and right tracks.

To video equipment without DV jack

The LINE-2 IN input on the front panel of the VCR is convenient if you connect or disconnec a camcorder frequently.



(continued)

Connections and preparation (continued)

Tips
- Editing is not possible with a tape that is copyright protected.
- LANC mode of camcorders are usually fixed to "S."
- For the DSR-200/200P digital video camera recorder, set SHUTTLE MODE to "B."

Notes
- The REC LEVEL and REC BALANCE controls do not function on a source input through the DV jack.
- With the DV connection, the playback VCR's AUDIO MONITOR (sound selection) and AUDIO MIX BALANCE (audio balance adjustment) do not function on the source audio output through the DV jack.

Preparation

On the player
- Insert a source tape.
- If the player VCR has an EDIT switch, set it to "ON."
- Set LANC MODE to "S."
- Turn off the on-screen display.

On the recorder (this VCR)
- Insert a recorded tape.
- Press INPUT SELECT so that the jack to which the player is connected appears in the display window:
  "DV," "L1," or "L2
- Set LANC MODE to "M."
- Set SHUTTLE MODE.
  A: When slow playback in reverse direction is not available on the other VCR.
  B: When slow playback in reverse direction is available on the other VCR.
- When you connect to the LINE-1 IN or LINE-2 IN jacks, set the audio recording mode to "16 (bit)" (Fs48k) or "12 (bit)" (Fs32k).
  When you are going to do insert recording, select the audio recording mode of the recorded tape.
- When you connect to the LINE-1 IN or LINE-2 IN jacks, adjust the recording level and balance with the REC LEVEL and REC BALANCE controls.
  Play back the source, then adjust the controls so that the red indicators of the level meter (page 13) in the display window do not light up. Select the balance according to your need (normally, set it to the center).

When using this VCR as the playback machine

In the following pages, editing procedures using this VCR as the recording machine are explained. To use this VCR as the playback machine, note the following.
- When connecting the LANC jack, set LANC MODE to "S" in the SET UP MENU. (page 21)
- If the other equipment that controls this VCR has the time code function, press COUNTER SELECT on this VCR so that the time code counter appears in the display window. (page 14)
- When you play back an audio dubbed tape and connect the other VCR (recorder) to this VCR's LINE OUT jacks, set the AUDIO MONITOR selector to "MIX." Then select the precise balance between the tracks with the AUDIO MIX BALANCE control. (page 11)

For further instructions on editing, refer to the instruction manual of the recording VCR or editing controller.

Synchronized editing

Notes
- The recording does not stop the moment you press ■ to stop editing. The source picture may be recorded a little longer than you expect.
- If you record on the beginning part of the tape, or on the part just after an unrecorded portion, the first part of the recording may be dropped.
- When you record on a new or fully rewound tape, do a trial recording for about 15 seconds, then start the actual recording. If you start the actual recording from the beginning of the tape, the first part may not be recorded when you play back the tape on another VCR.

You can synchronize starting and pausing of recording on this VCR (recorder) and starting and pausing of playback on the other VCR (player).
You need a player VCR equipped with a LANC jack for this editing.
Connect the LANC jack on this VCR to that on the other VCR, using the LANC cable.

1 **Locate the points where you want to start playback or recording. Then, set this VCR and the other VCR to playback pause mode.**

2 **Press EDIT STANDBY.**

3 **Press START/PAUSE.**
Playback starts on the other VCR and recording starts on this VCR.

4 **Press START/PAUSE the point you want to stop editing.**
Both VCRs are set to pause.
If the tape passes the point to stop editing, press RECORDER and rewind the tape to that point, with the shuttle ring or jog dial.

5 **To edit another scene, repeat steps 1 to 4.**

6 **To finish editing, press EDIT STANDBY.**
Both VCRs stop.

Duplicate

Notes
- When you start copying, the first part of the source tape may be dropped on the copied tape.
- You may not be able to copy the first part or an unrecorded portion of the source tape. Locate the recorded portion on the source tape, then start copying.
- When you record on a new or fully rewound tape, do a trial recording for about 15 seconds, then start the actual recording. If you start the actual recording from the beginning of the tape, the first part may not be recorded when you play back the tape on another VCR.
- The recording does not stop the moment you press ■ to stop editing. The source picture may be recorded a little longer than you expected.
- You can duplicate the photo data only when you use a tape recorded in DVCAM format for a player. If there is a portion recorded in DV format on the tape, recording is suspended and beep sounds. (When "BEEP" is set to "OFF" on the SET UP MENU, only recording is suspended.)

If you copy a source tape, using the DUPLICATE W/TC (duplicate with time code) button on this VCR, you can copy the time code recorded on the source tape as they are. You can easily make a work tape having the same time codes as the source tape.
The duplicate function on this VCR works only when using a source tape recorded in DVCAM format and making DV connections.
Connect the LANC jack on this VCR to that on the other VCR, using the LANC cable.

1 Connect this VCR and the other VCR, using a DV cable and select "DV IN" with INPUT SELECT on this VCR.

2 Locate the point where you want to start playback or recording. Then, set this VCR and the other VCR to playback pause mode.

3 Press DUPLICATE W/TC.
The indicator lights and this VCR enters into recording standby mode. To cancel recording, press EDIT STANDBY again.

4 Press START/PAUSE.

To stop duplicate
Press ■ (STOP).

Assemble editing

Notes
- If the remaining time appears in the display window of the main unit, You cannot execute assemble editing.
- Do not select another input while assemble editing is being executed. Editing may not be done correctly.
- This VCR may malfunction if the IN/OUT points are not separated by more than two seconds.
- If an event you want to record is marked with a time code of less than 0:01:00:00, the event will be edited inaccurately. In this case, use the manual editing procedure.
- If the time code of the other VCR is displayed as "—:—:—:—" during fast-forward or rewind, assemble edit may not function.
- You cannot press PLAYER while this VCR is in playback mode.
- Do not press MARK while the other VCR is in stop mode. Assemble editing may not function correctly.
- If you record over a previous recording, the end of the new recording will not continue on to the original recording smoothly.
- If you record on the beginning part of the tape, or on the part just after the unrecorded portion, the first part of recording may be dropped.
- When you record on a new or fully rewound tape, do a trial recording for about 15 seconds, then start the actual recording. If you start the actual recording from the beginning of the tape, the first part may not be recorded when you play back the tape on another VCR.

Tips
- To prevent tape damage, the tape automatically starts play back frame by frame if recording pause continues for about 5 minutes.
- To record to the end after the last event, leave the OUT point of the last event unspecified.

You can select various scenes called "events," from a source tape and record them in any order you choose.
You can edit up to 10 events at a time.
Connect the LANC jack on this VCR to that on the other VCR, using the LANC cable.

1 If the other VCR has a time code function, set it to the time code display.
If not, set it to tape counter.

2 Press ASSEMBLE.
The indicator lights up.

3 Locate the IN point of the first event.
1 Press PLAYER and start playing the tape.
2 Locate the IN point with the jog dial or shuttle ring.
3 Press MARK.
The IN point is stored.

4 Locate the OUT point.
1 Locate the OUT point with the jog dial or shuttle ring.
2 Press MARK.
The OUT point of the first event is stored.
The total recording time is displayed.
A few seconds later, "IN" flashes and you can designate the IN/OUT points for the next event.

5 To locate other events, repeat steps 3 and 4.
You can designate up to 10 events.

To check events
Stop the other VCR and press EVENT/BACK. Each event is displayed in order and you can check the events.

To change events
1 Press EVENT/FWD or EVENT/BACK to select the In and OUT points of events. Change the IN/OUT points if required.
2 Repeat steps 3 and 4 to set the events.

6 Locate the point you want to start recording on this VCR.
1 Press RECORDER.
2 Press ► (PLAY), then search for the recording start point with the jog dial or shuttle ring.
3 Press START/PAUSE so that this VCR is set to recording pause.

(continued)

Assemble editing (continued)

7 Press START / PAUSE.
The whole screen appears and assemble editing starts.
When editing ends, this VCR is set to recording pause and the screen in step **6** reappears.

To assemble edit more than 10 events

1. Press ASSEMBLE.
   The assemble editing mode is canceled, and the IN/OUT points stored in memory are erased.
2. Repeat steps **2** to **7**.

To stop assemble editing

To stop while editing, press START/PAUSE.
This VCR is set to recording pause, and you can check the events or change the recording starting point.
When you press START/PAUSE again, editing restarts from the first event.

To end assemble editing

Press ASSEMBLE.
All the IN/OUT points are erased.

Note
The recording does not stop the moment you press ■ to stop editing. The source picture may be recorded a little longer than you expected.

Video/audio insert

You can replace the original picture or sound with those from the source tape. After insert editing, the original picture or sound is erased.
If you have to insert picture or sound into the master tape, make a work tape using the duplicate function on this VCR, and use it for editing operations.

Using video equipment with a LANC jack

Connect the LANC jack on this VCR to that on the other VCR, using the LANC cable.

1 Press COUNTER SELECT so that the tape counter appears.

2 Locate the end point of the scene to be recorded over.

1. Press RECORDER.
2. Press ►, then locate the recording end point with the jog dial or shuttle ring.
3. Press COUNTER RESET at the end point.

3 Locate the start point of the scene to be recorded over.
Locate the beginning of the scene to be recorded over with the jog dial or shuttle ring.

4 [In case of video insert only]
Press VIDEO INSERT.
The indicator lights.

[In case of audio insert only]
Press STEREO 1 INSERT or STEREO 2 INSERT as follows:

When you record from DV input
Press both STEREO 1 INSERT and STEREO 2 INSERT. You cannot replace stereo 1 track or stereo 2 track only.

When you record from LINE inputs
- To record in 16bit audio (Fs48k), press both STEREO 1 INSERT and STEREO 2 INSERT.
- To record in 12bit audio (Fs32k) on the stereo 1 track, press STEREO 1 INSERT.
- To record in 12bit audio (Fs32k) on the stereo 2 track, press STEREO 2 INSERT.

[In the case of simultaneous audio/video insert]
Press VIDEO INSERT to prepare for video insert and press STEREO 1 INSERT or STEREO 2 INSERT to select the track to replace.

Notes
- Do not change the counter display during insert editing. Editing may not function accurately.
- Insert editing cannot be made on a blank portion of the tape. When a blank is detected, the VCR stops editing.
- If you record on the beginning part of the tape, or on the part just after the unrecorded portion, the first part of recording may be dropped.
- After pressing STEREO 1 or 2 INSERT, it may take up to 7 seconds for the sound to switch to the source tape. You cannot start recording until the sound switches.

(continued)

Video/audio insert (continued)

Tip

If you do not want to stop insert editing when the counter comes to "0H00M00S," change the counter display to the time code.

5 **Locate the playback start point of the source tape.**

1 Press PLAYER.

2 Press ▶, then locate the playback start point with the jog dial or shuttle ring.

3 Locate the beginning of the source scene with the jog dial or shuttle ring.
The EDIT STANDBY indicator lights.

6 **Press START/PAUSE.**

Video insert, audio insert or both video and audio insert editing starts.

When the tape counter reaches "0H00M00S," the recording on this VCR stops automatically (the other VCR continues playing.)

To stop the other VCR, press PLAYER, then press ■.

To stop recording manually, press START/PAUSE.

Notes

- Do not change the counter display during insert editing. Editing may not function accurately.
- Insert editing cannot be made on a blank portion of the tape. When a blank is detected, the VCR stops editing.
- If you record on the beginning part of the tape, or on the part just after the unrecorded portion, the first part of recording may be dropped.
- After pressing STEREO 1 or 2 INSERT, it may take up to 7 seconds for the sound to switch to the source tape. You cannot start recording until the sound switches.

Using video equipment without a LANC jack

You can also insert audio/video from a VCR without a LANC jack, and audio from a cassette recorder or a microphone.

If you have to insert picture or sound into the master tape, make a work tape using the duplicate function on this VCR, and use the work tape for editing operations.

1 **Press COUNTER SELECT so that the tape counter appears.**

2 **Locate the end point of the scene to be recorded over.**

1 Press ▶, then locate the recording end point with the jog dial or shuttle ring.

2 Press COUNTER RESET at the end point.

3 **Locate the start point of the scene to be recorded over.**

Locate the beginning of the scene to be recorded over with the jog dial or shuttle ring.

4 **[In case of video insert only]**
Press VIDEO INSERT.
The indicator lights.

[In case of audio insert only]
Press STEREO 1 INSERT or STEREO 2 INSERT as follows:

When you record from DV input

Press both STEREO 1 INSERT and STEREO 2 INSERT. You cannot replace stereo 1 track or stereo 2 track only.

When you record from LINE inputs

- To record in 16bit audio (Fs48k), press both STEREO 1 INSERT and STEREO 2 INSERT.
- To record in 12bit audio (Fs32k) on the stereo 1 track, press STEREO 1 INSERT.
- To record in 12bit audio (Fs32k) on the stereo 2 track, press STEREO 2 INSERT.

[In the case of simultaneous audio/video insert]
Press VIDEO INSERT to prepare for video insert and press STEREO 1 INSERT or STEREO 2 INSERT to select the track to replace.

(continued)

Video/audio insert (continued)

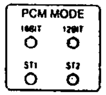
Tip
If you do not want to stop insert editing when the counter comes to "0H00M00S," change the counter display to the time code.

5 Press the play button on the player to start playback, then set it to playback pause a few seconds before the beginning of the scene to be inserted.

6 Press the pause button on the player to start playback. At the beginning of the scene you want to replace, press ⏸ on this VCR to start recording.
Video insert, audio insert or both video and audio insert editing starts.
When the tape counter reaches "0H00M00S", the recording tape stops automatically.

7 Press the stop button on the player.

Tip
During recording and playing back, the indicators light according to the audio recording mode and the track being recorded. Example: when sound is recorded onto the stereo 2 track in 12bit audio.

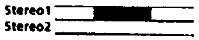
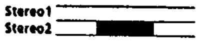
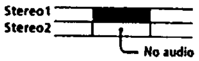
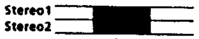
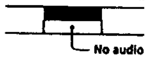
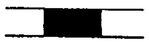


Tips
- To execute V.O.S. (video on sound) editing:
  1 Record the audio first, following the same procedure as recording video.
  2 Follow the insert editing procedure to record the video.
- To insert audio from the MIC jack, select "LINE 1" or "LINE 2", using the INPUT SELECT button.

How the audio recording mode selection affects editing results

When you record from DV input
This VCR automatically records in the same audio recording mode as the source tape, regardless of the AUDIO MODE setting in the SET UP MENU. For this connection, press both STEREO 1 INSERT and STEREO 2 INSERT buttons.

When you record from LINE inputs
The sound is recorded in the audio recording mode selected in AUDIO MODE of the SET UP MENU. Usually, choose the original audio recording mode of the tape to be edited. Select the track to be replaced according to the audio recording mode.

Original audio mode of the edited tape	Menu choice	Pressed button(s)	Editing Result ■ : Replaced section
12bit (Fs32k)	12bit (Fs32k)	STEREO 1	
		STEREO 2	
		STEREO 1 and STEREO 2*	
	16bit (Fs48k)	STEREO 1 and STEREO 2*	
16-bit	12bit (Fs32k)	STEREO 1 and STEREO 2*	
	16bit (Fs48k)	STEREO 1 and STEREO 2*	

* Insert editing cannot be executed if you press only one button.

Connecting other equipment

For usage, connections, etc., refer to the instruction manual of the equipment to be connected.

Connecting an editing controller

- When using this VCR as a recorder or as a player, set the LANC MODE on this VCR to "S."
- If the controller has a shuttle mode, set it to "B."
- When you edit tapes using video/audio code and connecting an editing controller RM-E1000T to this VCR (recorder), set the "SEARCH" in the menu of RM-E1000T to "FF/REW."

Connecting a titler and a digital SEG

- When using this VCR as a player, set "AUTO DISPLAY" on the SET UP MENU to "OFF."
- When connecting a titler and a digital SEG equipped with the S VIDEO jack, use the S VIDEO connection.

Connecting a still picture capture board kit

- Set the LANC MODE on this VCR to "S."

Connecting a Video Printer equipped with a LANC jack.

- Set the LANC MODE on this VCR to "S."

Making a tape duplication system by connecting a number of DSR-30/30P units

- Make sure to use an audio/video distributor. If you make a loop connection, picture and sound may deteriorate.
- When using a CONTROL S jack, you can make a loop-through connection. Check the commander mode of the wired remote commander and set the same mode on this VCR. (page 17)
- For details on a wired remote commander, consult the shop where you purchased it.
  You cannot use the following remote commanders with this VCR: SVRM-100, RM-250, RM-S18 and RM-S52A.

Precautions

Notes on the video cassette recorder

Do not install the unit in a place subject to direct sunlight or heat sources
If you do, its cabinet, mechanical parts, etc., may be damaged.

Do not install the unit in an extremely hot place
If the unit is left in a car parked with its windows closed (especially in summer), its cabinet may be damaged or it may not work correctly.

If the unit is brought directly from a cold to a warm location
Moisture may condense inside the unit and cause damage to the video head and tape. If you use the unit in a place subject to direct cold currents from an air conditioner, moisture may also condense inside the unit.

Do not place a heavy objects on the unit
The cabined may be damaged, or the VCR may not work correctly.

Do not handle the recorder roughly
Avoid rough handling or mechanical shock.

To avoid damaging the cabinet finish
Plastic is often used for the surface finishing of the recorder. Do not spray a volatile solvent such as an insecticide toward the cabinet or place rubber or vinyl products on the cabinet for a long time. If you do, the finish of the cabinet may be damaged or the coating may come off.

Do not clean the cabinet with thinner or benzine
The cabinet may be damaged or its coating may come off. When you use a chemical-impregnated cloth, use it according to its directions.

Clean the cabinet with soft dry cloth
When the cabinet is very dirty, clean it with a soft dry cloth lightly moistened with a mild detergent solution and finish it with dry cloth.

Do not put magnetic objects close to the unit
Magnetic fields may damage the recording.

Checking the video heads every 1000 hours
A VCR is a high-precision piece of equipment that records and plays back the picture on a magnetic tape. In particular, the video head and other mechanical parts become dirty or worn. To maintain a clean picture, we recommend maintenance every 1000 hours, though the using condition may differ depending on temperature, humidity, dust, etc.

(continued)

Cleaning of the video heads

If the video heads are contaminated, the pictures cannot be recorded properly or the playback pictures become noisy. If the following phenomena occur, use the cleaning cassette DVM12CL (supplied) or CV-12CL (not supplied) to clean the heads.

- Square-shaped noise appears on the playback picture.
- A part of the playback picture does not move.
- The playback picture does not appear on the screen.

Symptoms caused by contaminated video heads

If these pictures appear on the screen, use the cleaning cassette.

After prolonged use, the video heads may become worn out. If optimum picture quality is not restored even after you have cleaned the video heads with the cleaning cassette, the video heads may have worn out. In that case, you have to replace the video heads with new ones. Please consult your Sony dealer.

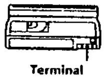
Notes on the video cassettes

Usable cassettes

We recommend to use the Standard-DVCAM/Mini-DVCAM cassettes to get the most out of high reliability of DVCAM format.

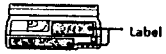
Cleaning the terminal

If the terminal of the Standard-DVCAM or Mini-DVCAM cassette gets dirty, or dust sticks to the terminal, the VCR may not work correctly. Clean the connector with the swab once every ten times you eject a cassette.



When affixing a label on the cassette

Be sure to affix a label on only the location as illustrated below so as not to cause malfunction of the VCR.



After using a cassette

After use, please be sure to rewind the tape completely (to prevent picture and sound distortion). Return it to its case and store in upright position.

About moisture condensation

If the unit or tape is brought directly from a cold to a warm location, moisture may condense inside or outside the unit or tape. If you use the tape or video heads in this condition, the tape may adhere to the head drum, and the video heads or the tape may be damaged, or malfunction may occur.

Moisture condensation is likely to occur under the following conditions:

- The unit is brought from the cold outdoors to a warm indoor location.
- The unit is brought from the air-conditoned indoors to the hot outdoors.
- The unit is used in a place subject to cold currents from an air conditioner.

When bringing the unit from a cold place to a warm place or vice versa, put it in a plastic bag and seal the bag tightly. After bringing it into the new place, leave the bag on for about an hour, and remove the bag when the air temperature inside it has reached the temperature surrounding it.

If moisture condensation occurred

You cannot operate the unit except to press ≜ EJECT. If you insert a cassette, it is ejected automatically. If this occurs, turn on the power, wait about an hour for the moisture to evaporate.

Compatibility of DVCAM and DV format

DVCAM format is developed as a more reliable and higher end format than consumer DV format. Here are explained about DVCAM and DV formats: the differences, compatibility, and limitations on editing.

Differences between DVCAM and DV format

Item	DVCAM	DV
Track pitch	15 µm	15 µm
Audio sampling frequency	12bit: 32 kHz 16bit: 48 kHz	12 bit: 32 kHz, 44.1 kHz 48 kHz
Audio recording mode[1]	Lock mode	Unlock mode
Time mode	Drop frame system or Non-drop frame system	Drop frame system only

[1] There are two modes for audio recording, Lock mode and Unlock mode. In Lock mode, the sampling frequencies of audio and video are synchronized. In Unlock mode, which consumer DV format adopts, the two sampling frequencies are independent. Therefore, lock mode is more effective than unlock mode in digital processing and smooth transition during audio editing.

DVCAM and DV cassettes

Both DVCAM and DV cassettes can be used on DVCAM or DV video equipment. The recording format of picture is defined according to recorder's format as described below.

Recorder's format	Cassette's format	Recording format
DVCAM	DVCAM	DVCAM
	DV	DVCAM
DV	DVCAM	DV
	DV	DV

This digital video cassette recorder complies with DVCAM format. Though DV cassettes can be used for recording, we recommend you to use DVCAM cassettes to get the most out of high reliability of DVCAM format.
The recording time of DV cassettes is 2/3 shorter than that indicated on the DV cassettes.

Compatibility on playback

Some tapes cannot be played back on DVCAM or DV video equipment.

Tape	On DV video equipment	On DVCAM video equipment
DV-formatted	Can be played back	Can be played back (only when recorded in SP mode)
DVCAM-formatted	Cannot be played back[1]	Can be played back

[1] Some DV video equipment may be able to play back a DVCAM-formatted tape. Even if the tape is played back, contents of the playback cannot be guaranteed.

Compatibility on editing using DV connection

When this digital video cassette recorder is connected to other DVCAM or DV video equipment using DV connectors, the recording format of edited tapes is defined according to recorder's format as described below.

Source tape	Player's format	Recorder's format	Recorded format
DVCAM-formatted[1]	DVCAM	DVCAM	DVCAM
DVCAM-formatted	DVCAM	DV	DV[2]
DVCAM-formatted	DV[3]	DVCAM	Not editable
DVCAM-formatted	DV[3]	DV	DV[2]
DV-formatted	DVCAM	DVCAM	Not editable
DV-formatted[4]	DVCAM	DV	DV
DV-formatted	DV	DVCAM	Not editable
DV-formatted	DV	DV	DV

[1] Depending on signal conditions of the source tape, you may not be able to edit the tape using DV connection.
[2] Audio recording mode of the edited tape is lock mode.
[3] Some DV video equipment may be able to play back a DVCAM-formatted tape. Even if the tape is played back, contents of the playback cannot be guaranteed.
[4] DV-formatted tapes recorded in SP mode only can be used as source tapes.

Limitations on editing

You will find the following limitations when editing.

- Due to the difference of a track pitch, you cannot record or edit on DV-formatted tapes using DVCAM video equipment. In this case, do the following:
  - Copy a DV-formatted tape using audio/video jacks, then use the copied tape as a source tape.
- Depending on signal conditions, you may not be able to record or edit on DVCAM-formatted tapes.
  In these cases, do the following:
  - Edit using audio/video jacks.
  - Copy the tape again via SDI/QSDI using a VCR equipped with the SDI/QADI jack (DSR-85, DSR-85P).

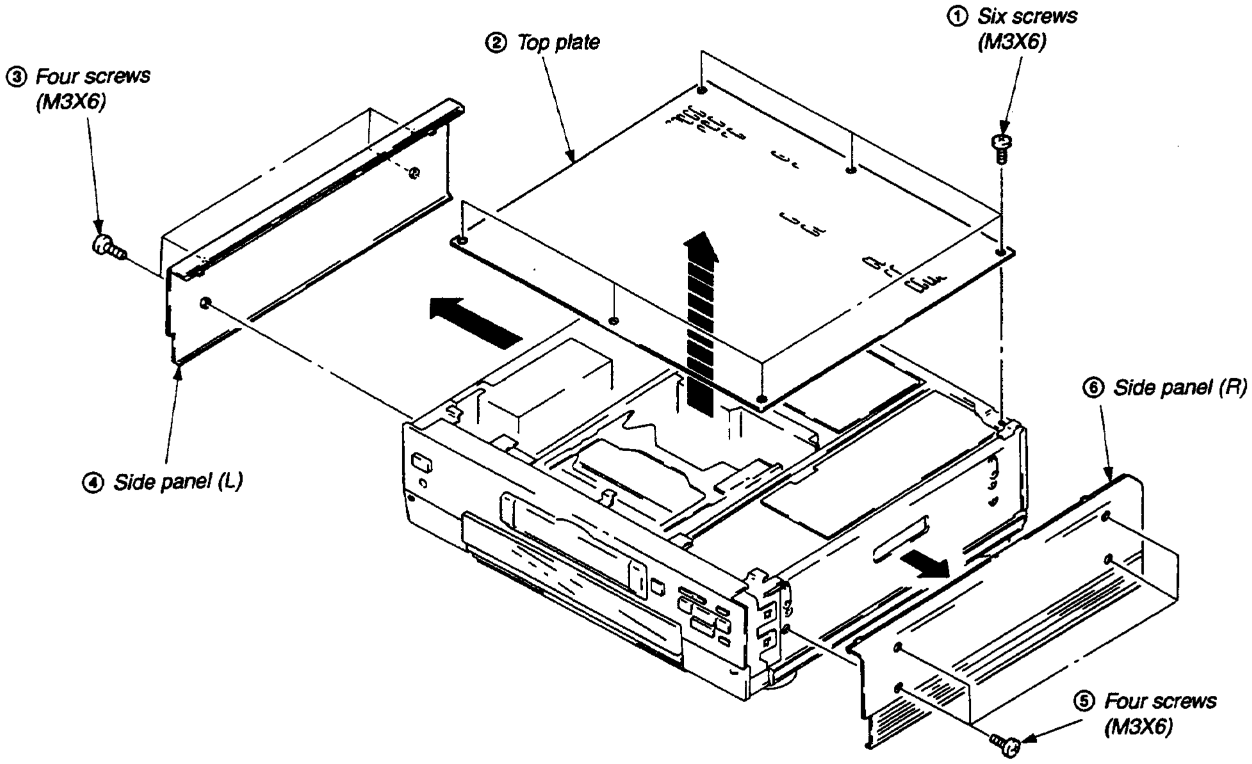
Warning and notice messages

Various messages appear on the monitor screen. Check them with the following list.

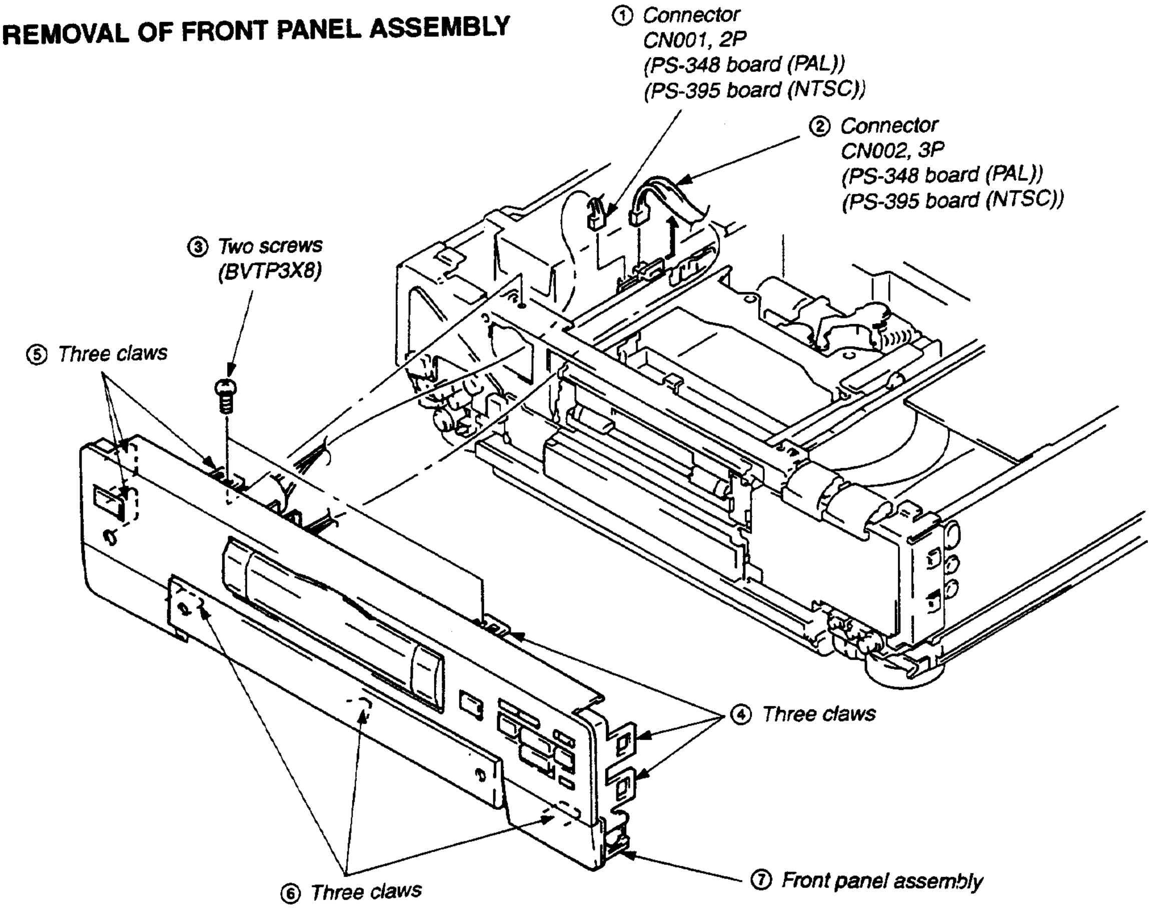
Message	**Meaning/Remedy**
PLEASE INSERT A CASSETTE	Though no cassette is inserted in the cassette compartment, you press ► or EDIT STANDBY. → Insert a cassette.
PLEASE STOP THE TAPE	During insert pause mode, you try to change input sources.
PLEASE SET THE CLOCK	When turning on the power, the clock has not been set.
PLEASE CONFIRM THE SAFETY SWITCH OF THE CASSETTE	Check that the protect tab is slid in so that the red portion visible. → Slide back the safety switch.
PLEASE REWIND OR INSERT A NEW CASSETTE	You try to start playback or recording at the tape end. → Rewind the tape or insert a new cassette.
VCR IS RECORDING	You press a certain operation button during recording or editing.
YOU CANNOT CHANGE INPUT SOURCE DURING RECORDING.	During recording, you try to change input sources.
THE TAPE IS REWOUND	PRESS ◀◀ during at the beginning of the tape.
PLEASE PUSH POWER TO SET TIMER. (DSR-30P only)	Turn off the VCR to make it enter timer standby mode.
YOU CANNOT INSERT 12 BIT IN 16 BIT SECTION	When you insert into STEREO 1 or STEREO 2 track of the tape recorded in 12bit mode (Fs32k), the tape switches to 16bit mode (Fs48k) → Insert in 16bit mode (Fs48k).
YOU CANNOT INSERT IN BLANK SECTION	You try to insert into an unrecorded portion.
PLEASE CHECK THE DV CABLE CONNECTION	When you execute Duplicate, etc., DV cable is not connected. → Connect the DV connector.
THIS PROGRAM IS COPYRIGHT PROTECTED.	You try to dub the tape copy right protect signals are recorded.
NO CASSETTE MEMORY	You try to erase cassette memory.
CASSETTE MEMORY IS TOO LARGE TO ERASE	You try to erase "INDEX DATA," "DATE DATA," or "PHOTO DATA" on a tape having more than 16 kbit memory capacity. →Erase "ALL DATA" on the tape.
WRITING ON CASSETTE MEMORY, PLEASE WAIT.	You do certain operation while the VCR is writing on cassette memory. → Operate after writing on cassette memory is complete.
PLEASE CONNECT PLAYBACK VCR WITH LANC CABLE, THEN SET THE PLAYBACK VCR LANC MODE TO 'S'	During editing, the LANC cable is not connected or LANC MODE of the playback VCR is not set to "S." → Connect a LANC cable or set LANC MODE of the playback VCR to "S."
THERE IS NO CASSETTE IN THE PLAYBACK VCR	During editing, no cassette is inserted in the cassette compartment of the player VCR. → Insert a cassete into the playback VCR.
THE TAPE IN THE PLAYBACK VCR IS AT THE END	During editing, a tape in the playback VCR is at the end → Rewind the tape.
PLAYBACK VCR IS RECORDING	During editing, the player VCR is in recording mode. → Set the playback VCR to playback mode.

SECTION 2
DISASSEMBLY

2-1. REMOVAL OF TOP PLATE AND SIDE PANEL

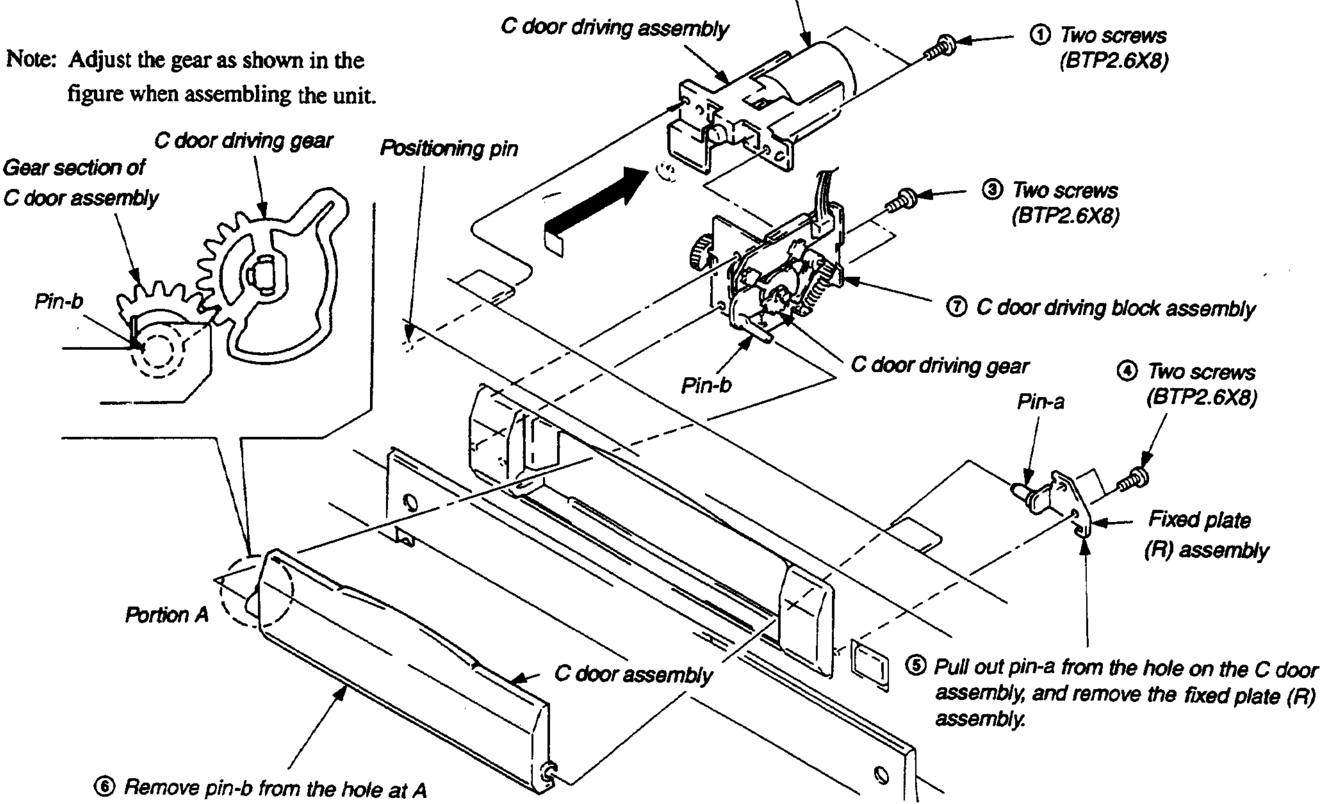

① Six screws
(M3X6)
② Top plate
③ Four screws
(M3X6)
④ Side panel (L)
⑤ Four screws
(M3X6)
⑥ Side panel (R)

2-2. REMOVAL OF FRONT PANEL ASSEMBLY


① Connector
CN001, 2P
(PS-348 board (PAL))
(PS-395 board (NTSC))
② Connector
CN002, 3P
(PS-348 board (PAL))
(PS-395 board (NTSC))
③ Two screws
(BVTP3X8)
⑤ Three claws
④ Three claws
⑥ Three claws
⑦ Front panel assembly

2-3. REMOVAL OF C DOOR ASSEMBLY

Note: Adjust the gear as shown in the figure when assembling the unit.



② *Remove the positioning pin, and remove the C door driving assembly in the direction of allow.*

① *Two screws (BTP2.6X8)*

③ *Two screws (BTP2.6X8)*

⑦ *C door driving block assembly*

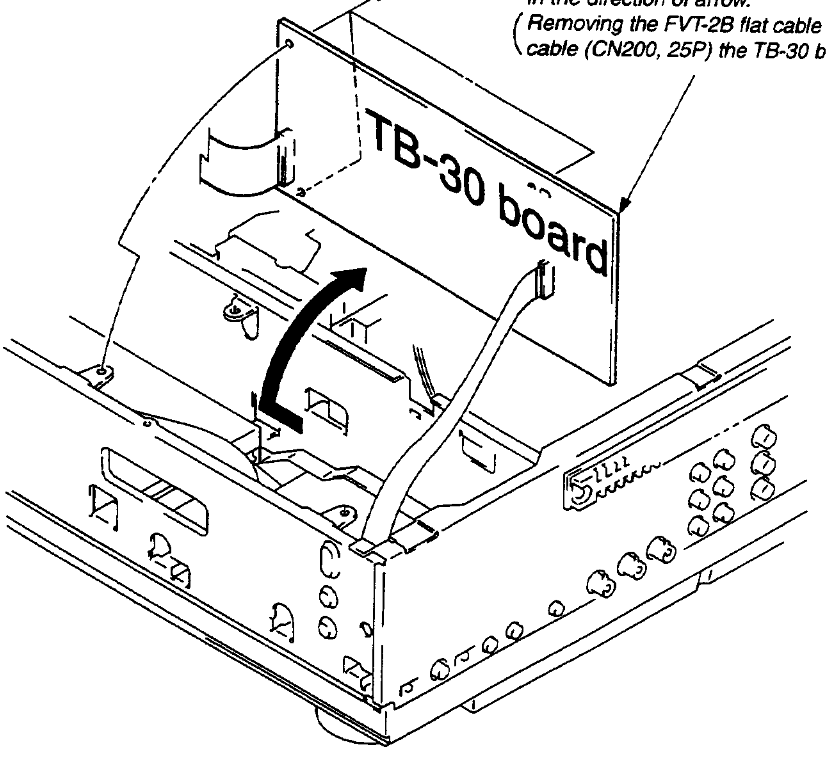
④ *Two screws (BTP2.6X8)*

⑤ *Pull out pin-a from the hole on the C door assembly, and remove the fixed plate (R) assembly.*

⑥ *Remove pin-b from the hole at A and remove the C door assembly.*

C door driving assembly
C door driving gear
Gear section of C door assembly
Positioning pin
Pin-b
C door driving gear
Pin-a
Fixed plate (R) assembly
Portion A
C door assembly

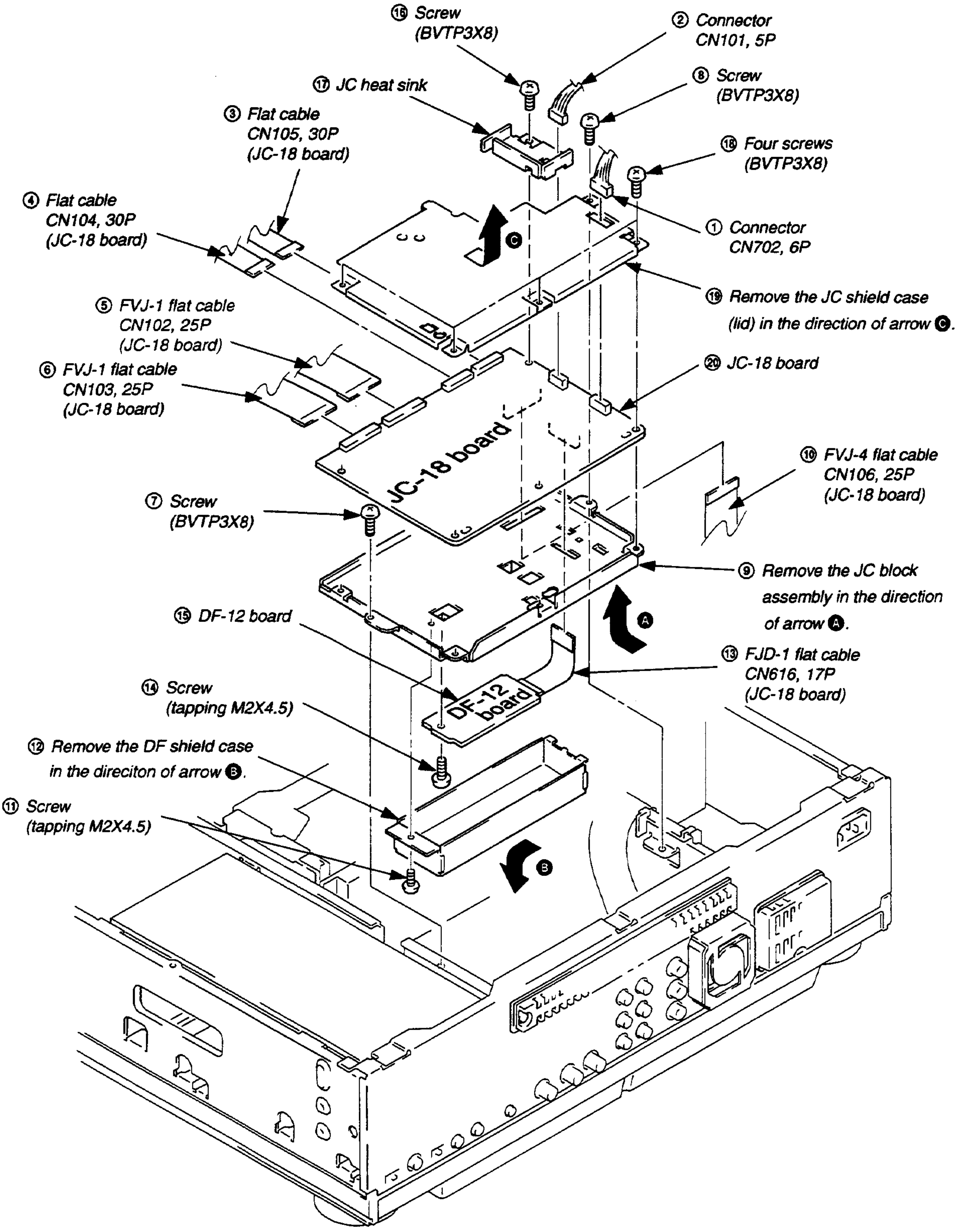
2-4. OPENING OF TB-30 BOARD. (SERVICE POSITION)



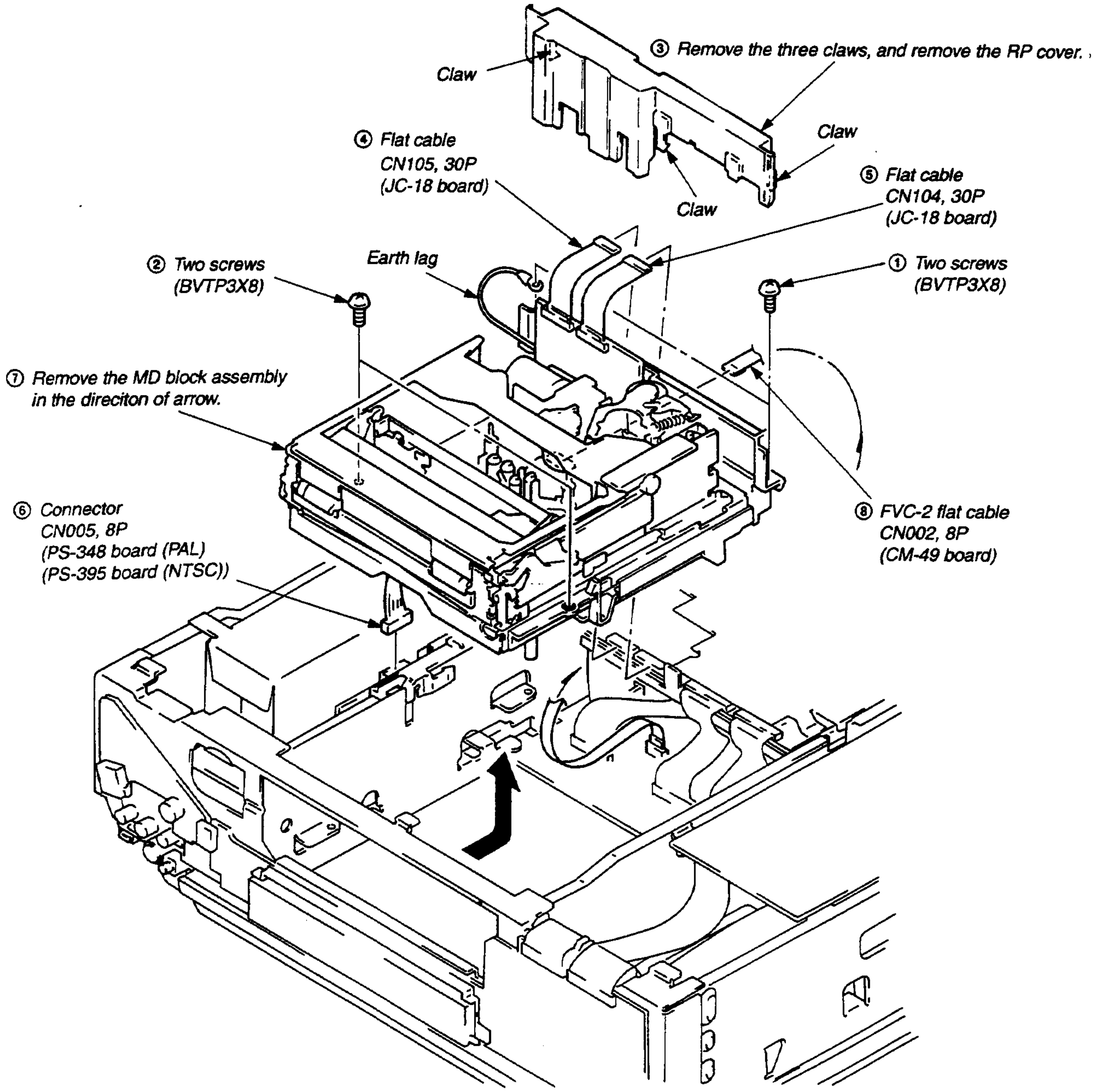
① *Three screws (BVTP3X8)*

② *Open the TB-30 board in the direction of arrow.*
(Removing the FVT-2B flat cable (CN100, 17P) and FFH-18 flat cable (CN200, 25P) the TB-30 board can be removed.)

2-5. REMOVAL OF JC-18 BOARD AND DF-12 BOARD

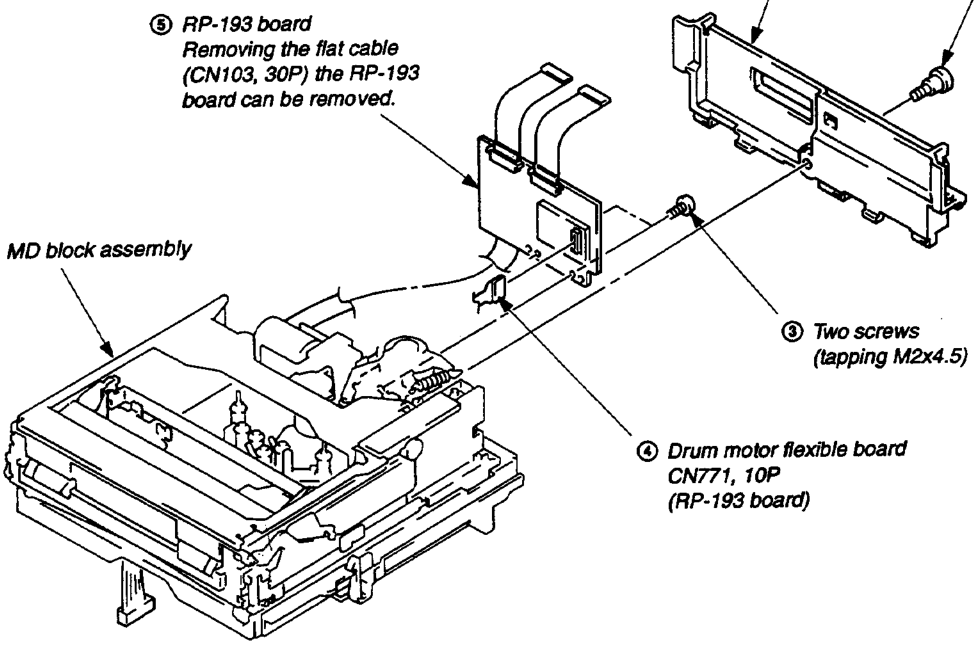

⑯ Screw (BVTP3X8)
② Connector CN101, 5P
⑰ JC heat sink
⑧ Screw (BVTP3X8)
③ Flat cable CN105, 30P (JC-18 board)
⑱ Four screws (BVTP3X8)
④ Flat cable CN104, 30P (JC-18 board)
① Connector CN702, 6P
⑲ Remove the JC shield case (lid) in the direction of arrow Ⓒ.
⑤ FVJ-1 flat cable CN102, 25P (JC-18 board)
⑥ FVJ-1 flat cable CN103, 25P (JC-18 board)
⑳ JC-18 board
JC-18 board
⑩ FVJ-4 flat cable CN106, 25P (JC-18 board)
⑦ Screw (BVTP3X8)
⑨ Remove the JC block assembly in the direction of arrow Ⓐ.
⑮ DF-12 board
⑬ FJD-1 flat cable CN616, 17P (JC-18 board)
DF-12 board
⑭ Screw (tapping M2X4.5)
⑫ Remove the DF shield case in the direciton of arrow Ⓑ.
⑪ Screw (tapping M2X4.5)
Ⓐ
Ⓑ
Ⓒ

2-6. REMOVAL OF MD BLOCK ASSEMBLY


③ Remove the three claws, and remove the RP cover.
Claw
Claw
Claw
④ Flat cable
CN105, 30P
(JC-18 board)
⑤ Flat cable
CN104, 30P
(JC-18 board)
② Two screws
(BVTP3X8)
Earth lag
① Two screws
(BVTP3X8)
⑦ Remove the MD block assembly
in the direciton of arrow.
⑥ Connector
CN005, 8P
(PS-348 board (PAL)
(PS-395 board (NTSC))
⑧ FVC-2 flat cable
CN002, 8P
(CM-49 board)

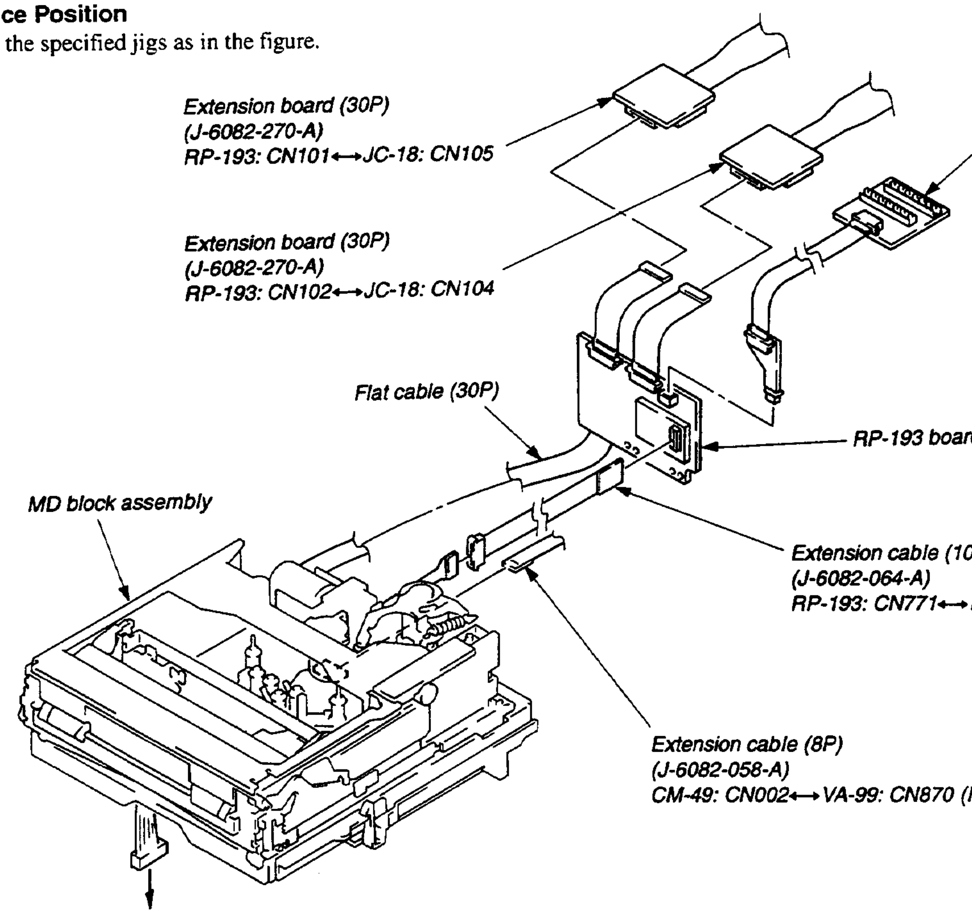
2-7. SERVICE POSITION OF RP-193 BOARD (CHECK OR ADJUSTMENT OF THE RECORDING CURRENT)

- **Opening of RP-193 Board**


② MD frame
① Special tapping screw (stepping M3)
⑤ RP-193 board Removing the flat cable (CN103, 30P) the RP-193 board can be removed.
MD block assembly
③ Two screws (tapping M2x4.5)
④ Drum motor flexible board CN771, 10P (RP-193 board)

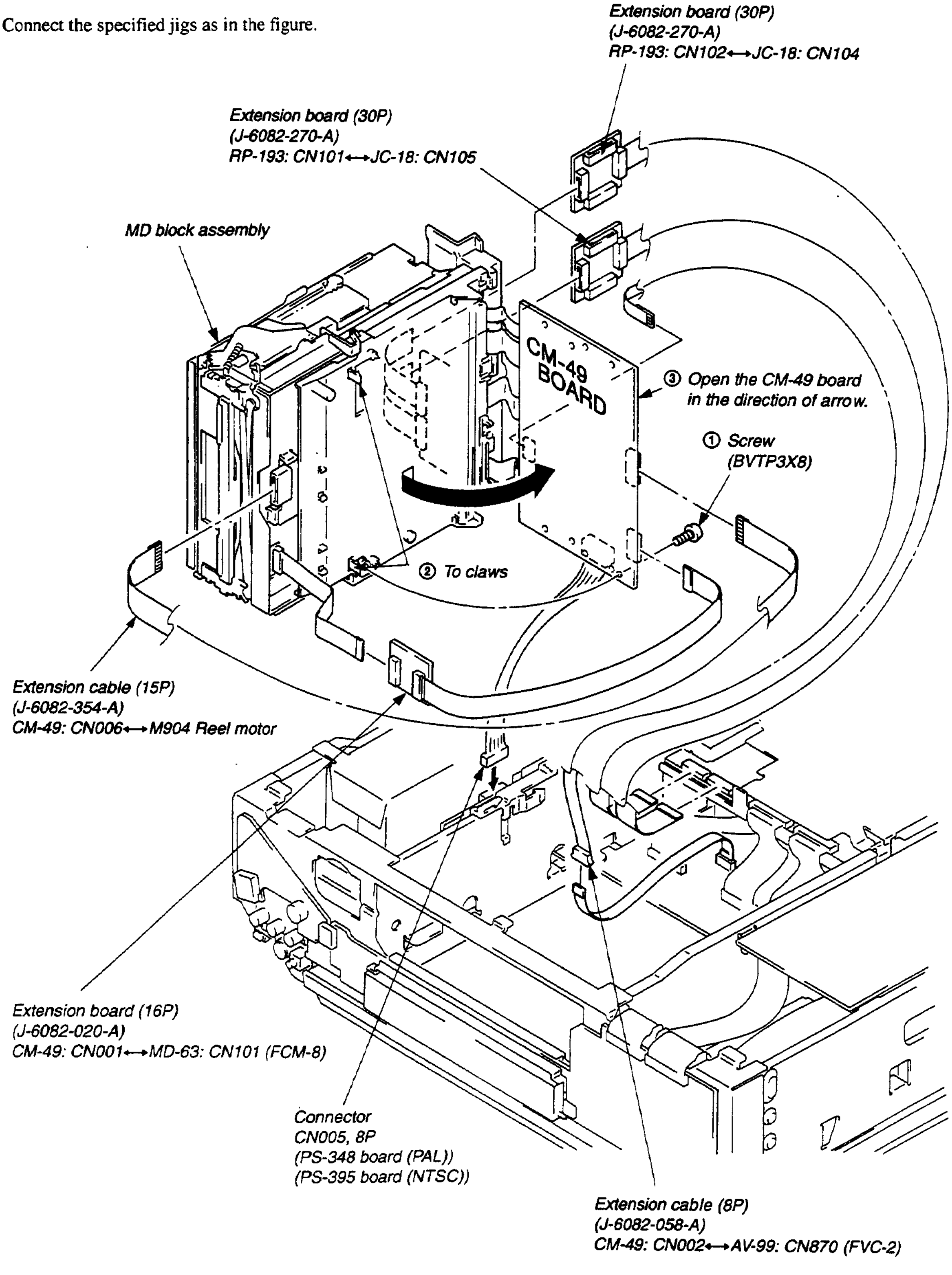
- **Service Position**

Connect the specified jigs as in the figure.

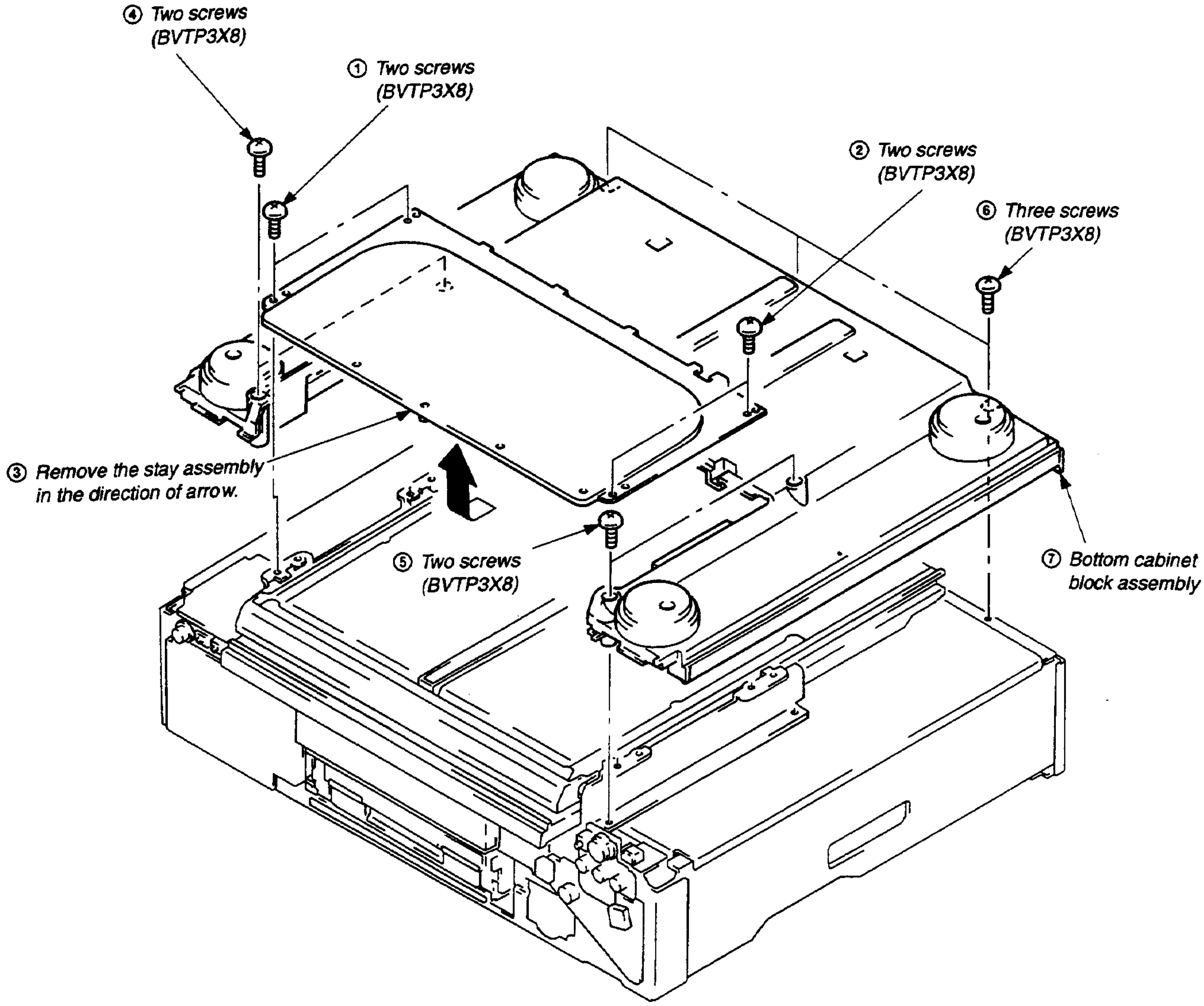

Extension board (30P) (J-6082-270-A) RP-193: CN101↔JC-18: CN105
CP-2 jig (14P) J-6082-140-A CN775 (RP-193 board)
Extension board (30P) (J-6082-270-A) RP-193: CN102↔JC-18: CN104
Flat cable (30P)
RP-193 board
MD block assembly
Extension cable (10P) (J-6082-064-A) RP-193: CN771↔Drum motor
Extension cable (8P) (J-6082-058-A) CM-49: CN002↔VA-99: CN870 (FVC-2)
To PS-348 board (CN005, 8P(PAL)).
To PS-395 board (CN005, 8P(NTSC)).

2-8. SERVICE POSITION OF CM-49 BOARD (CHECK OR ADJUSTMENT OF THE SERVO, SYSTEM CONTROL)

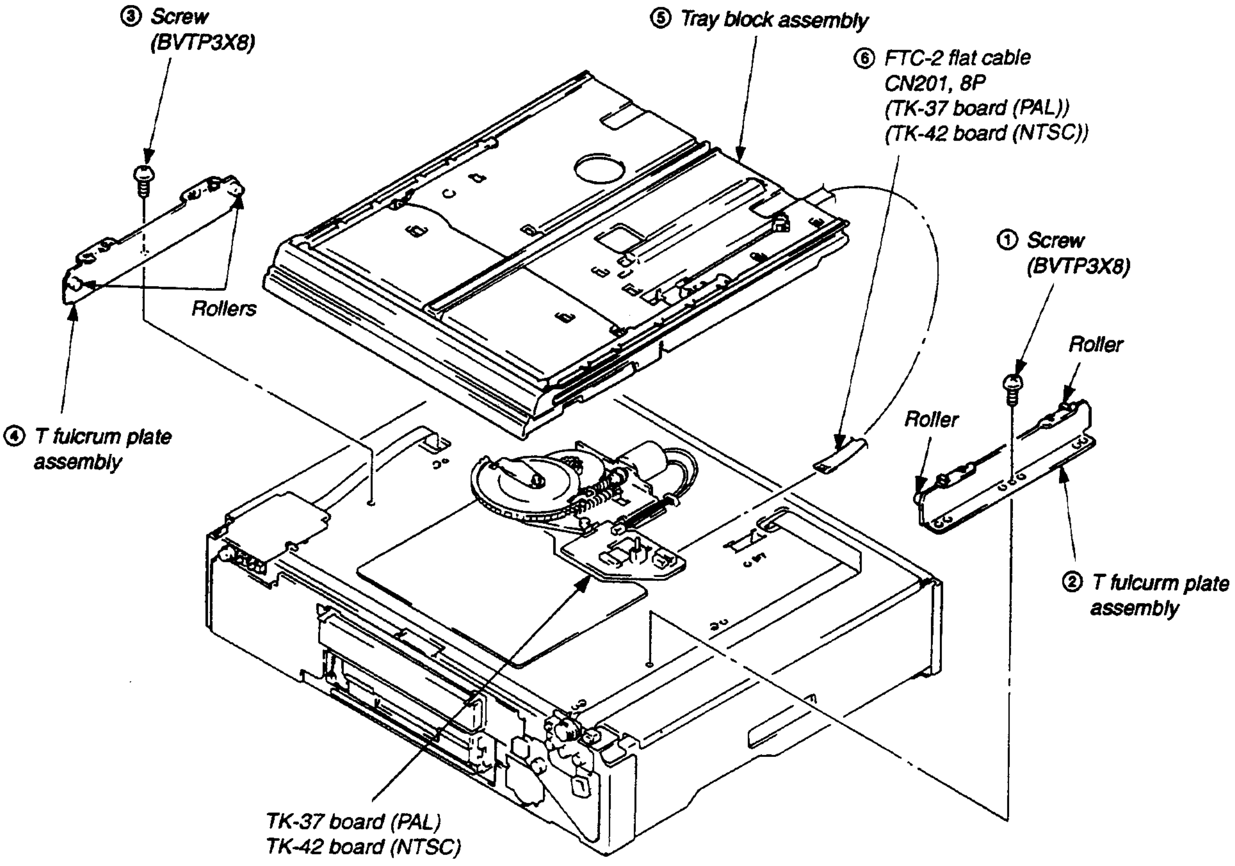
Connect the specified jigs as in the figure.


Extension board (30P)
(J-6082-270-A)
RP-193: CN102←→JC-18: CN104
Extension board (30P)
(J-6082-270-A)
RP-193: CN101←→JC-18: CN105
MD block assembly
CM-49 BOARD
③ Open the CM-49 board in the direction of arrow.
① Screw (BVTP3X8)
② To claws
Extension cable (15P)
(J-6082-354-A)
CM-49: CN006←→M904 Reel motor
Extension board (16P)
(J-6082-020-A)
CM-49: CN001←→MD-63: CN101 (FCM-8)
Connector
CN005, 8P
(PS-348 board (PAL))
(PS-395 board (NTSC))
Extension cable (8P)
(J-6082-058-A)
CM-49: CN002←→AV-99: CN870 (FVC-2)

2-9. REMOVAL OF BOTTOM CABINET BLOCK ASSEMBLY

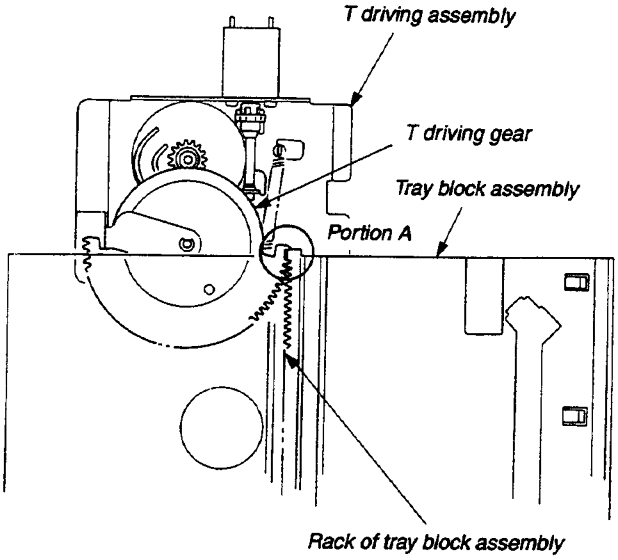

④ Two screws
(BVTP3X8)
① Two screws
(BVTP3X8)
② Two screws
(BVTP3X8)
⑥ Three screws
(BVTP3X8)
③ Remove the stay assembly
in the direction of arrow.
⑤ Two screws
(BVTP3X8)
⑦ Bottom cabinet
block assembly

2-10. REMOVAL OF TRAY BLOCK ASSEMBLY


③ Screw
(BVTP3X8)
⑤ Tray block assembly
⑥ FTC-2 flat cable
CN201, 8P
(TK-37 board (PAL))
(TK-42 board (NTSC))
Rollers
① Screw
(BVTP3X8)
Roller
Roller
④ T fulcrum plate
assembly
② T fulcurm plate
assembly
TK-37 board (PAL)
TK-42 board (NTSC)

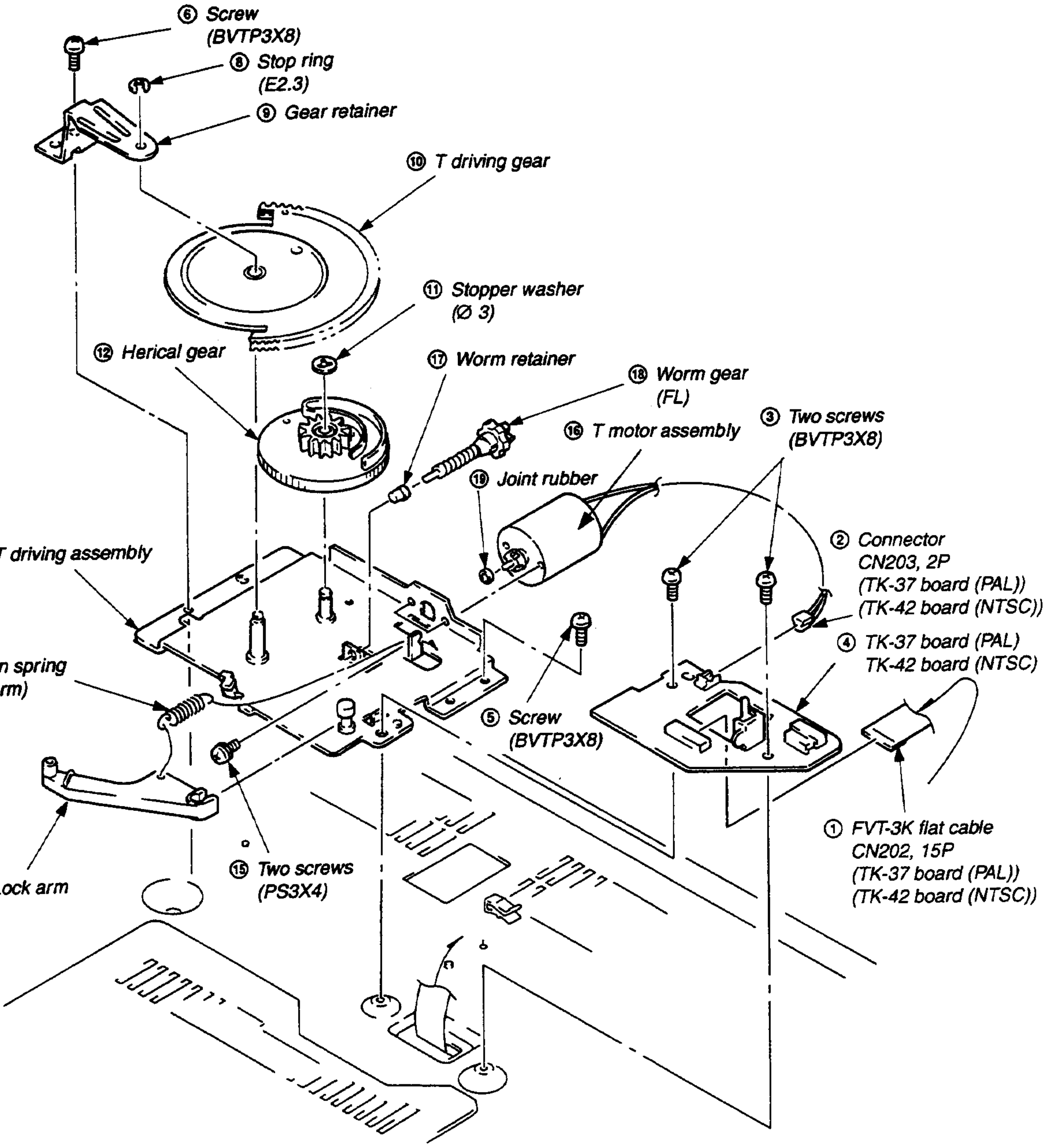
Installing procedure of the tray block assembly

1. Connect the connector of FTC-2 flat cable ⑥ to TK board (CN201, 8P).
↓
2. Install the two T fulcrum plate assemblies ②, ④.
↓
3. Fasten two screws ①, ③.
↓
4. Insert the tray block assembly ⑤ from the front. (The rollers of the T fulcrum plate assembly should be inserted in the grooves at the two sides of the tray.)
↓
5. Rotate the T driving gear so that it engages at A.
↓
6. Insert the tray block assembly ⑤ further.


T driving assembly
T driving gear
Tray block assembly
Portion A
Rack of tray block assembly

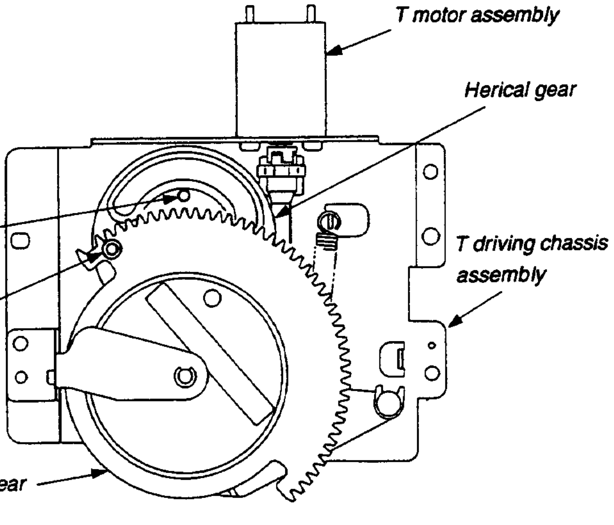
(FRONT SIDE)

2-11. REMOVAL OF T MOTOR ASSEMBLY

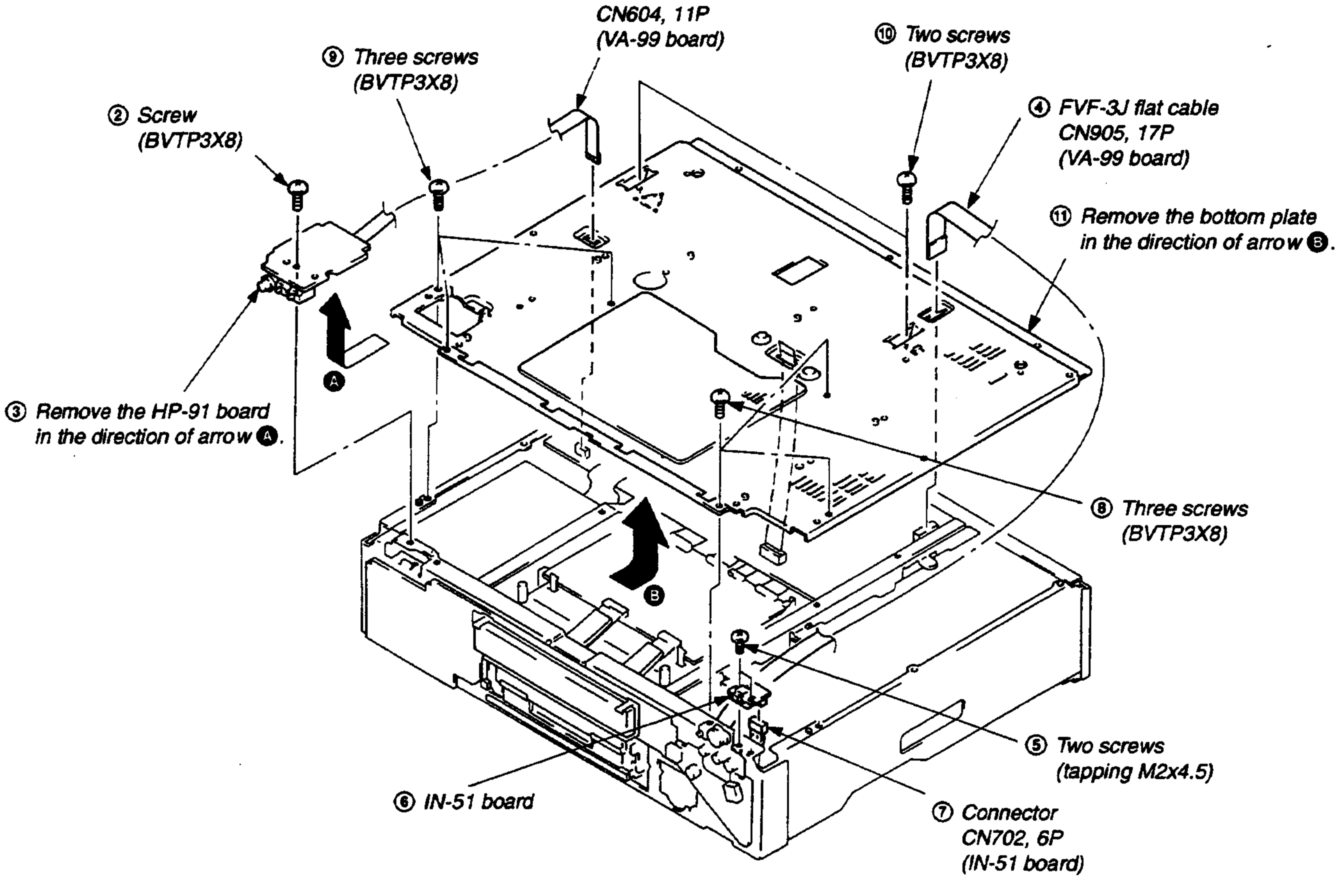

⑥ Screw
(BVTP3X8)
⑧ Stop ring
(E2.3)
⑨ Gear retainer
⑩ T driving gear
⑪ Stopper washer
(Ø 3)
⑫ Herical gear
⑰ Worm retainer
⑱ Worm gear
(FL)
⑯ T motor assembly
③ Two screws
(BVTP3X8)
⑲ Joint rubber
② Connector
CN203, 2P
(TK-37 board (PAL))
(TK-42 board (NTSC))
⑦ T driving assembly
④ TK-37 board (PAL)
TK-42 board (NTSC)
⑬ Tension spring
(lock arm)
⑤ Screw
(BVTP3X8)
① FVT-3K flat cable
CN202, 15P
(TK-37 board (PAL))
(TK-42 board (NTSC))
⑭ Lock arm
⑮ Two screws
(PS3X4)

Phase-Adjustment of T Driving Gear and Herical Gear

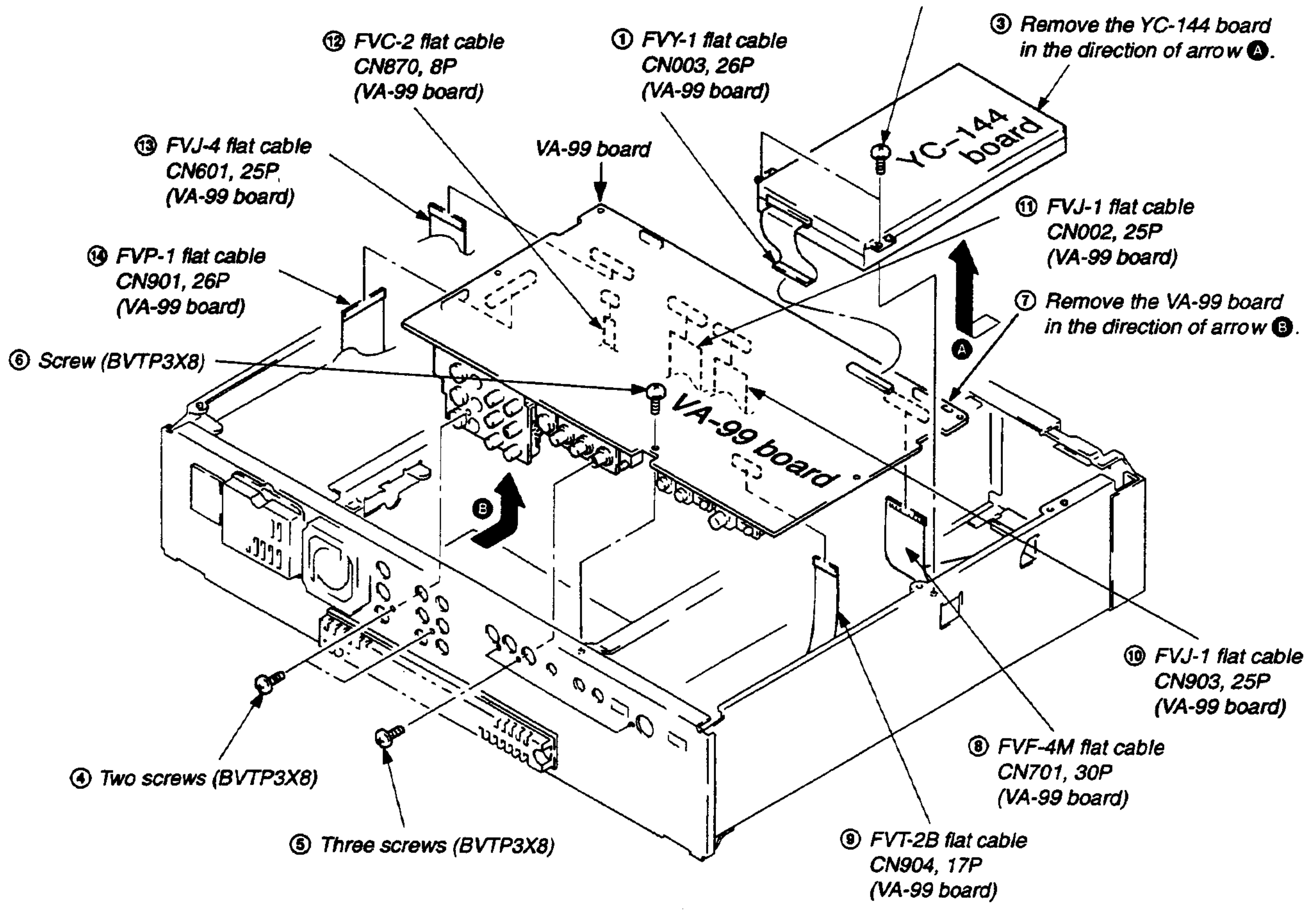
Note: When the T driving assembly is taken apart, the T driving gear and herical gear phases must be adjusted.
Adjust the phases as shown in the figure.


① Adjust the holes of the T driving chassis and herical gear to each other.
② Adjust the holes of the herical gear and T driving gear to each other.
T motor assembly
Herical gear
T driving chassis assembly
T driving gear

2-12. REMOVAL OF BOTTOM PLATE

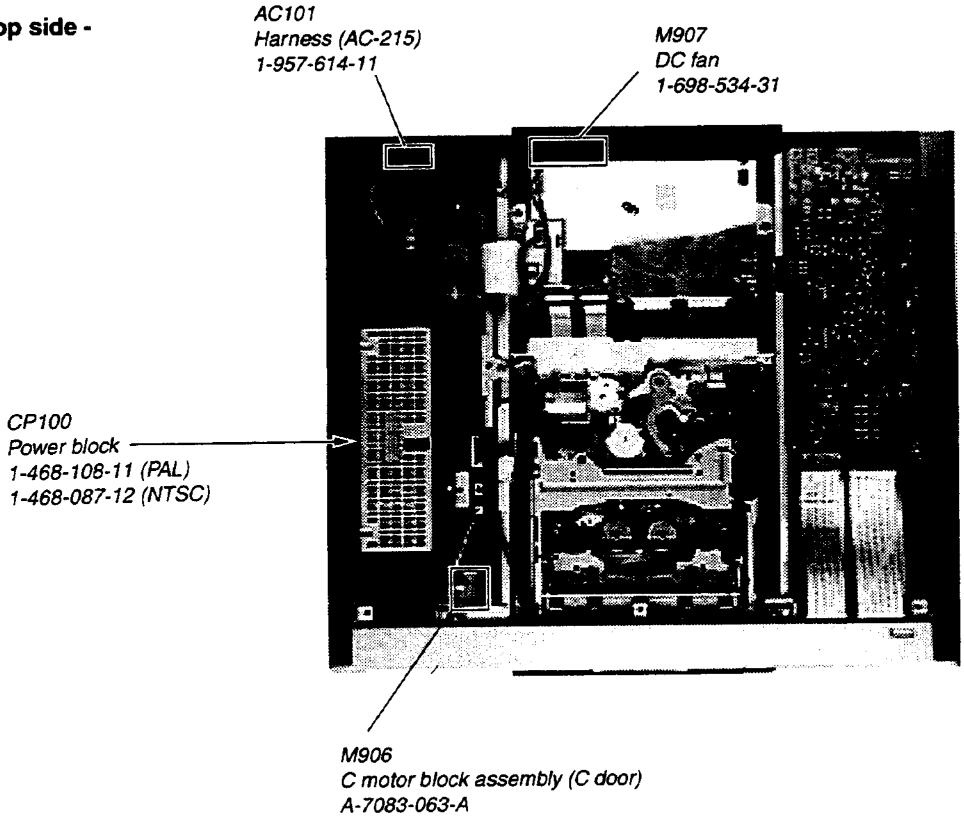

① FVH-1 flat cable
CN604, 11P
(VA-99 board)
⑨ Three screws
(BVTP3X8)
⑩ Two screws
(BVTP3X8)
② Screw
(BVTP3X8)
④ FVF-3J flat cable
CN905, 17P
(VA-99 board)
⑪ Remove the bottom plate
in the direction of arrow Ⓑ.
Ⓐ
③ Remove the HP-91 board
in the direction of arrow Ⓐ.
⑧ Three screws
(BVTP3X8)
Ⓑ
⑤ Two screws
(tapping M2x4.5)
⑥ IN-51 board
⑦ Connector
CN702, 6P
(IN-51 board)

2-13. REMOVAL OF VA-99 BOARD AND YC-144 BOARD

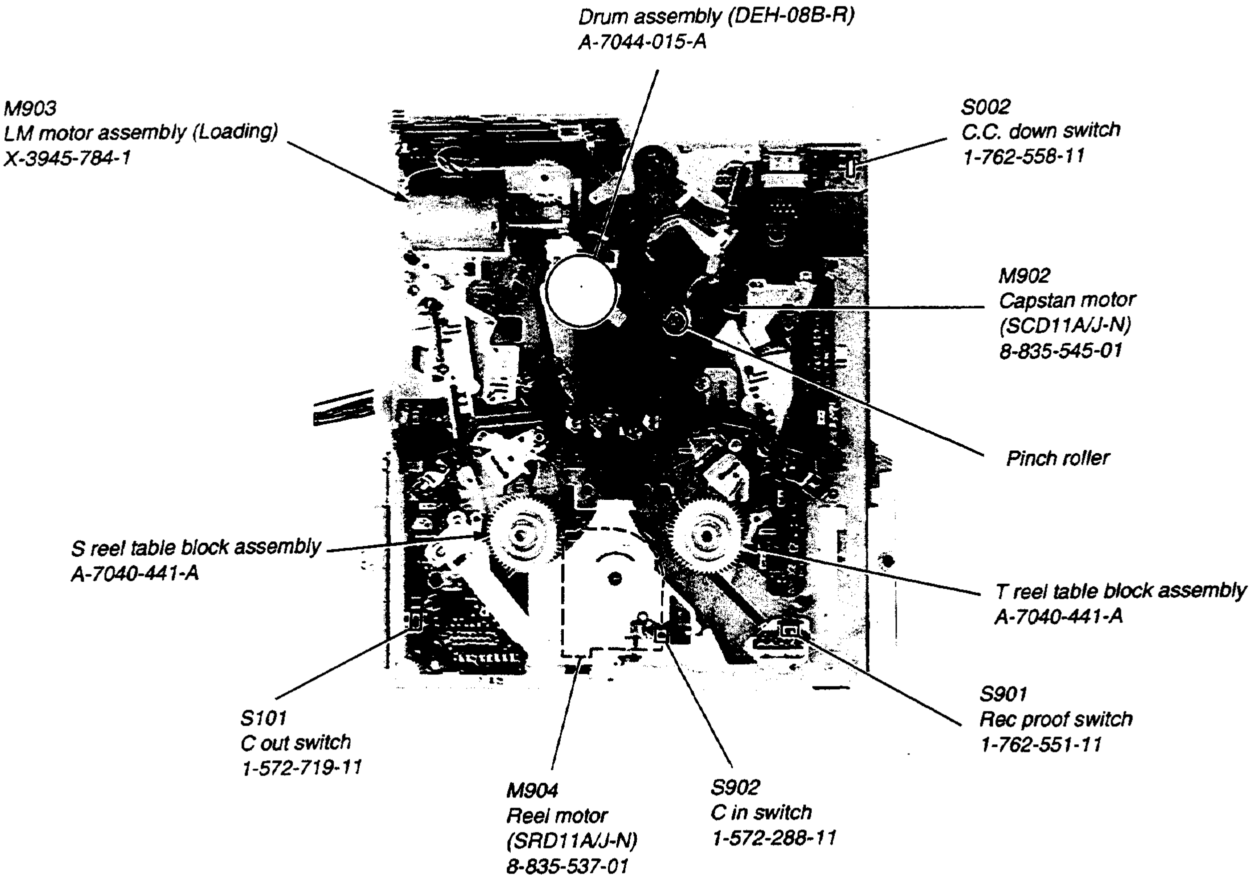

② Two screws (BVTP3X8)
③ Remove the YC-144 board
in the direction of arrow Ⓐ.
⑫ FVC-2 flat cable
CN870, 8P
(VA-99 board)
① FVY-1 flat cable
CN003, 26P
(VA-99 board)
YC-144 board
⑬ FVJ-4 flat cable
CN601, 25P
(VA-99 board)
VA-99 board
⑪ FVJ-1 flat cable
CN002, 25P
(VA-99 board)
⑭ FVP-1 flat cable
CN901, 26P
(VA-99 board)
⑦ Remove the VA-99 board
in the direction of arrow Ⓑ.
⑥ Screw (BVTP3X8)
Ⓐ
VA-99 board
Ⓑ
⑩ FVJ-1 flat cable
CN903, 25P
(VA-99 board)
⑧ FVF-4M flat cable
CN701, 30P
(VA-99 board)
④ Two screws (BVTP3X8)
⑤ Three screws (BVTP3X8)
⑨ FVT-2B flat cable
CN904, 17P
(VA-99 board)

2-14. INTERNAL VIEWS

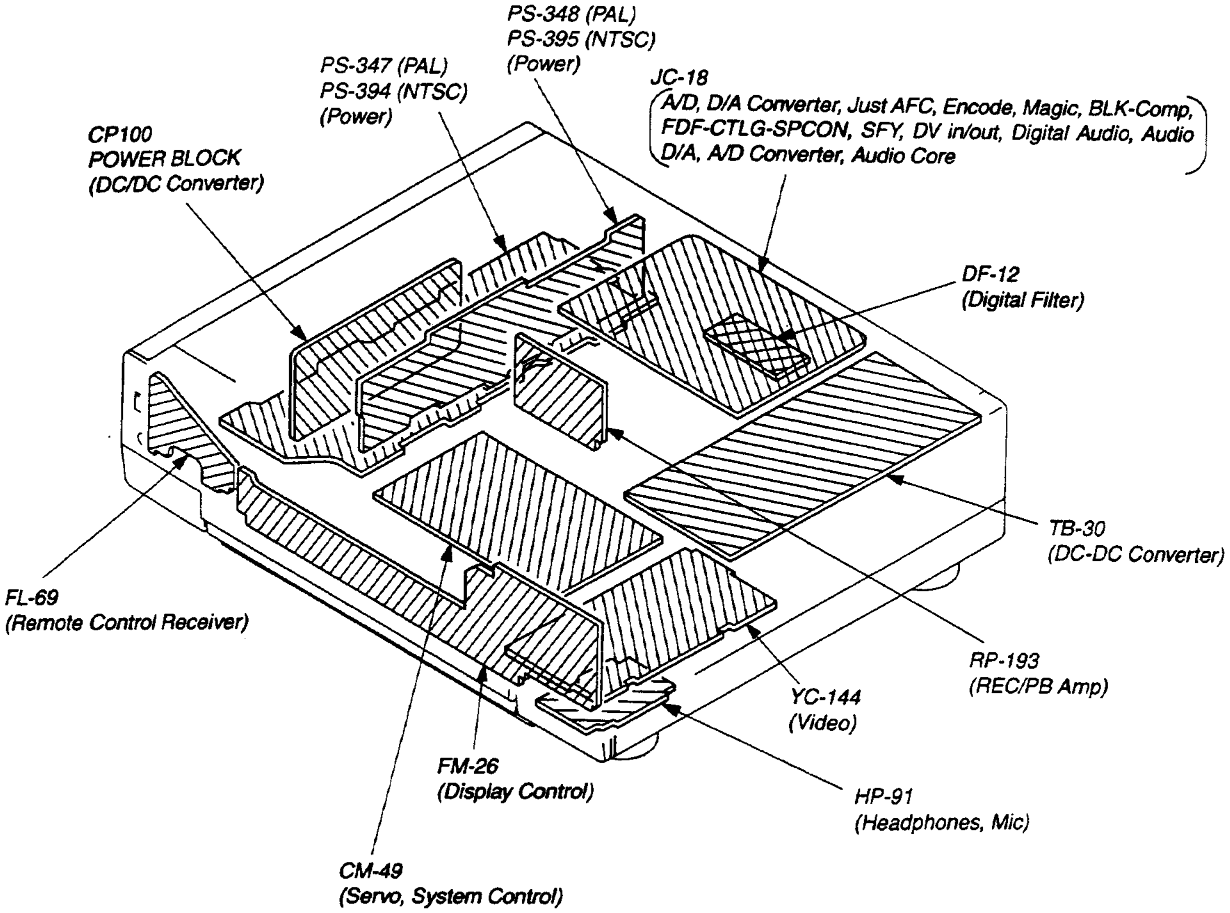
- Top side -

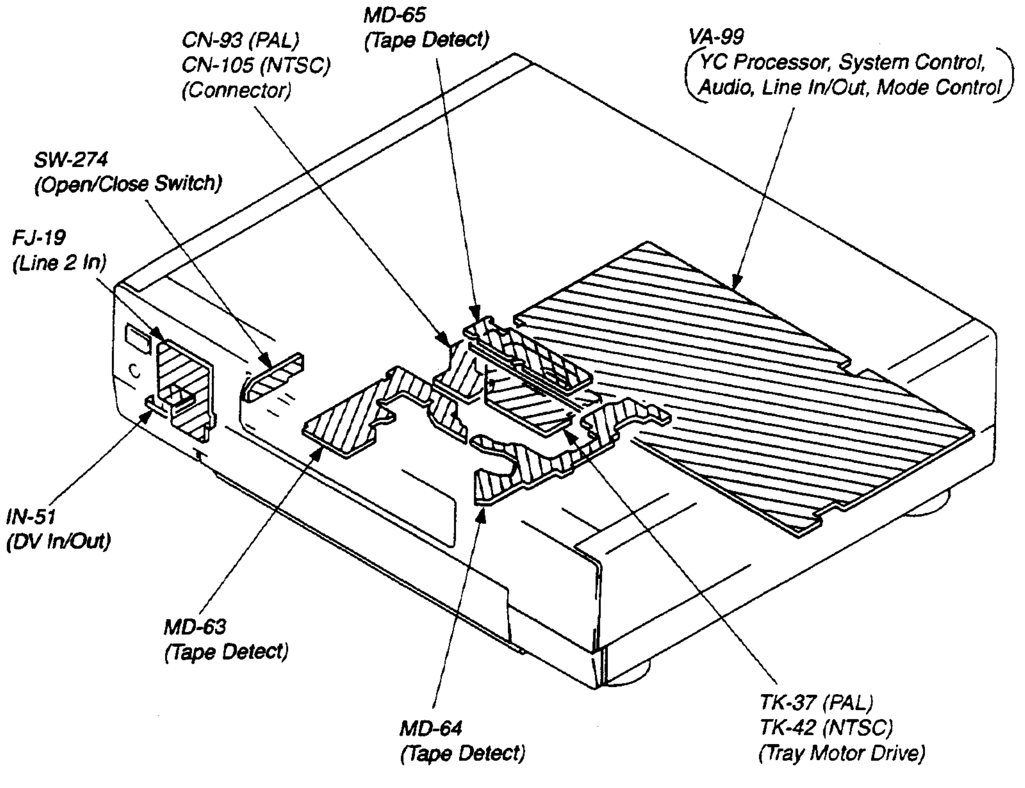

AC101
Harness (AC-215)
1-957-614-11
M907
DC fan
1-698-534-31
CP100
Power block
1-468-108-11 (PAL)
1-468-087-12 (NTSC)
M906
C motor block assembly (C door)
A-7083-063-A

- MD block assembly (E mechanism) -


M901
Drum assembly (DEH-08B-R)
A-7044-015-A
M903
LM motor assembly (Loading)
X-3945-784-1
S002
C.C. down switch
1-762-558-11
M902
Capstan motor
(SCD11A/J-N)
8-835-545-01
Pinch roller
S reel table block assembly
A-7040-441-A
T reel table block assembly
A-7040-441-A
S901
Rec proof switch
1-762-551-11
S101
C out switch
1-572-719-11
M904
Reel motor
(SRD11A/J-N)
8-835-537-01
S902
C in switch
1-572-288-11

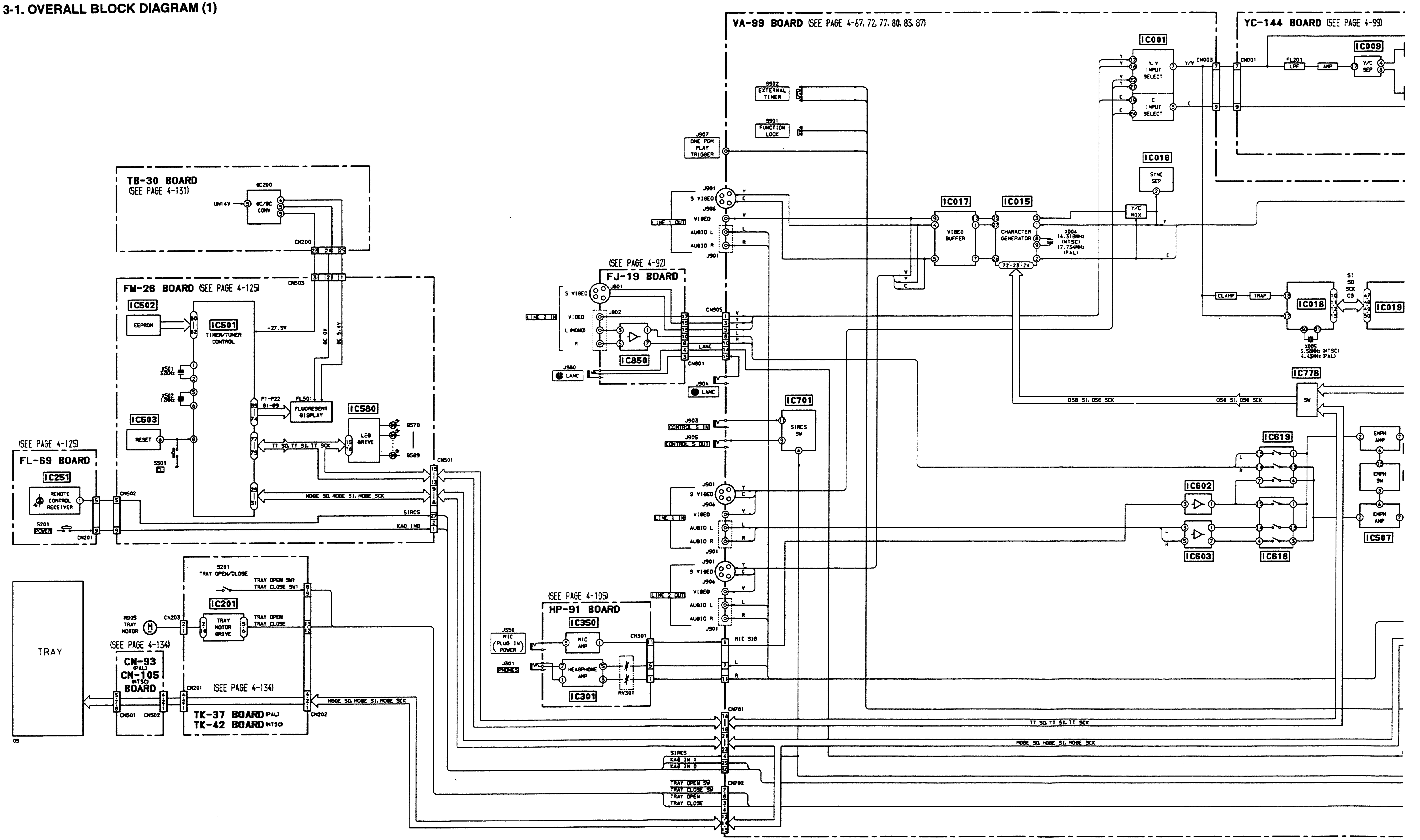
2-15. CIRCUIT BOARDS LOCATION


PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

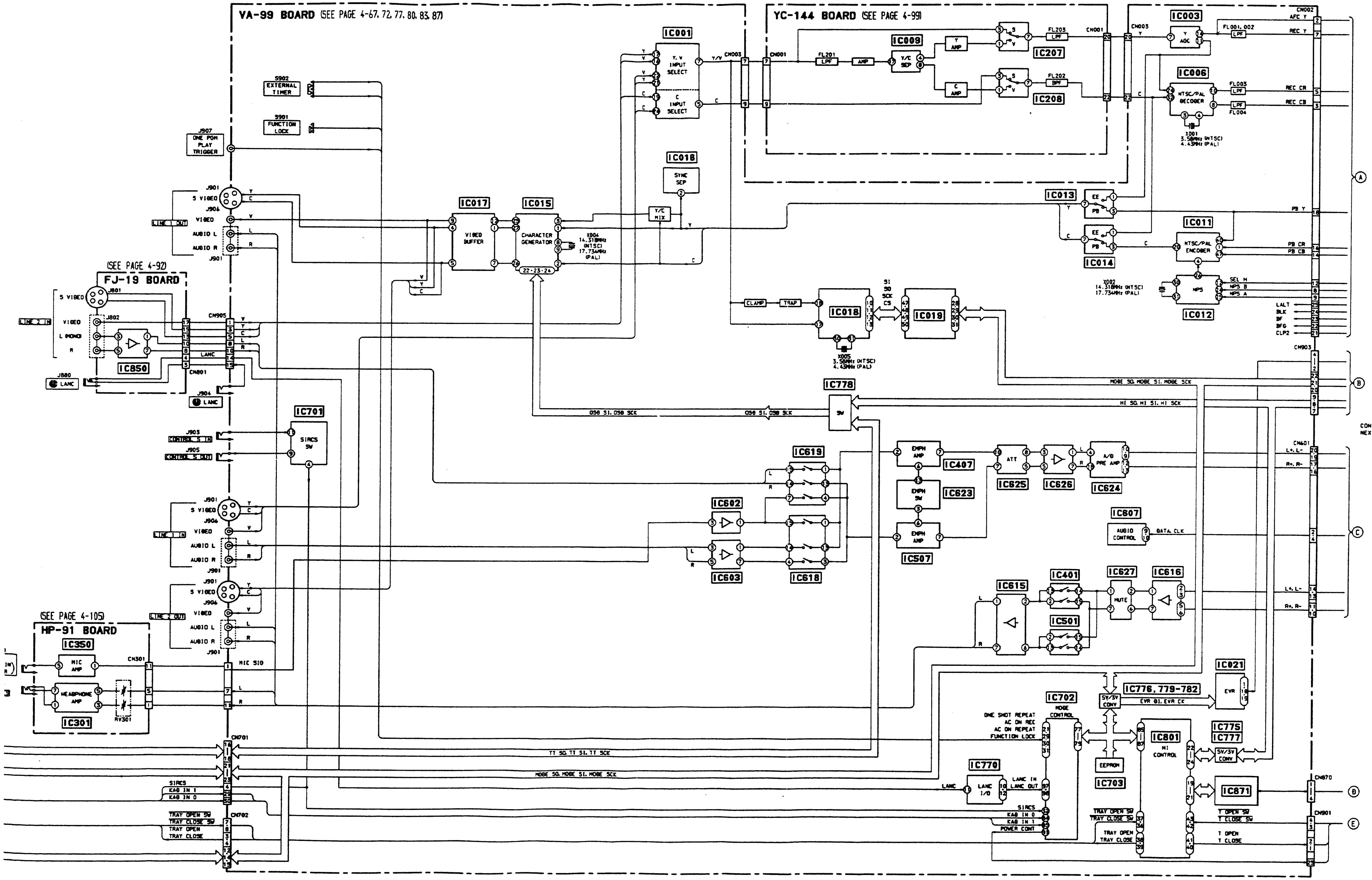

MD-65
(Tape Detect)
CN-93 (PAL)
CN-105 (NTSC)
(Connector)
VA-99
YC Processor, System Control, Audio, Line In/Out, Mode Control
SW-274
(Open/Close Switch)
FJ-19
(Line 2 In)
IN-51
(DV In/Out)
MD-63
(Tape Detect)
MD-64
(Tape Detect)
TK-37 (PAL)
TK-42 (NTSC)
(Tray Motor Drive)

SECTION 3
BLOCK DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM (1)

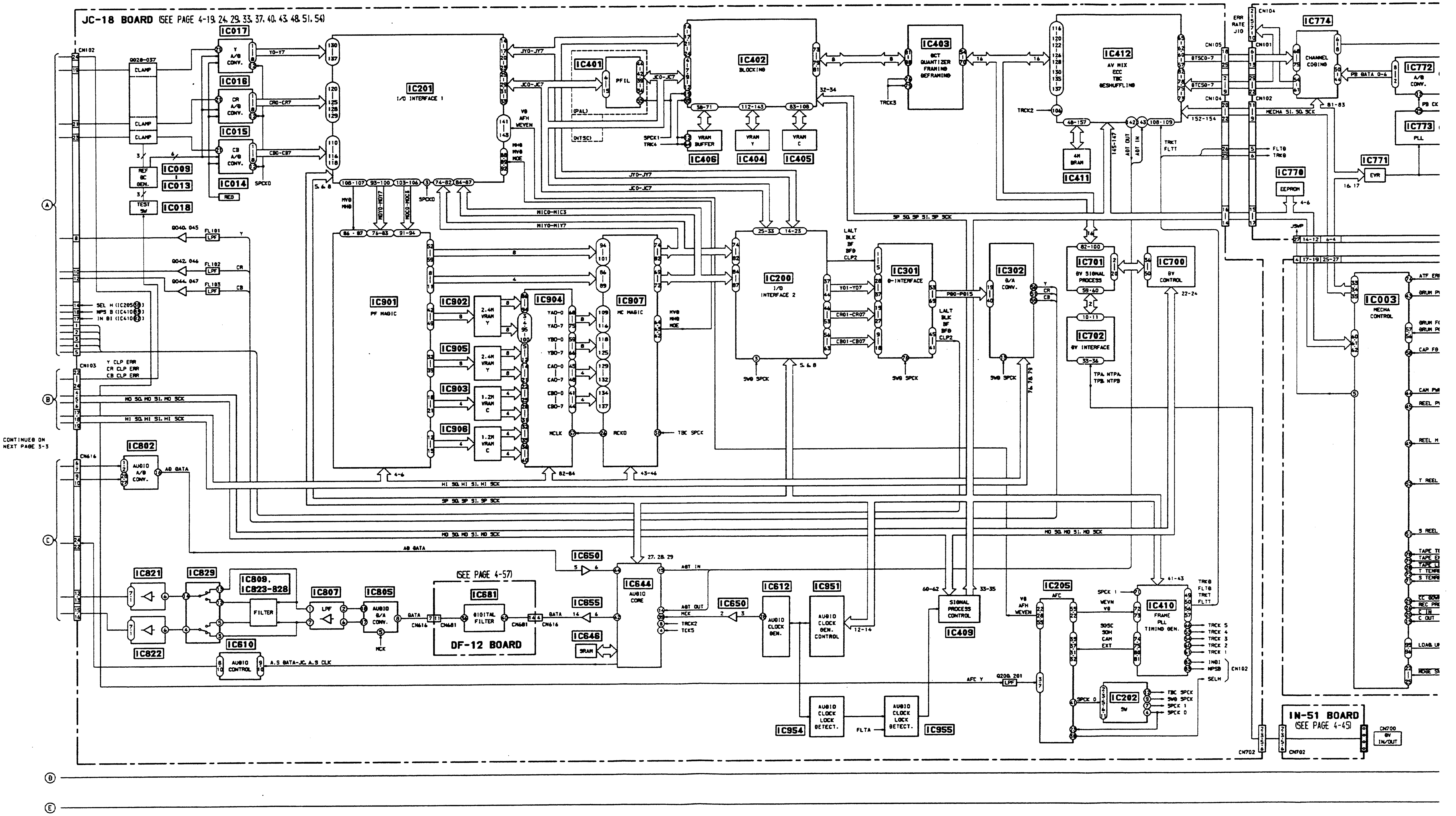


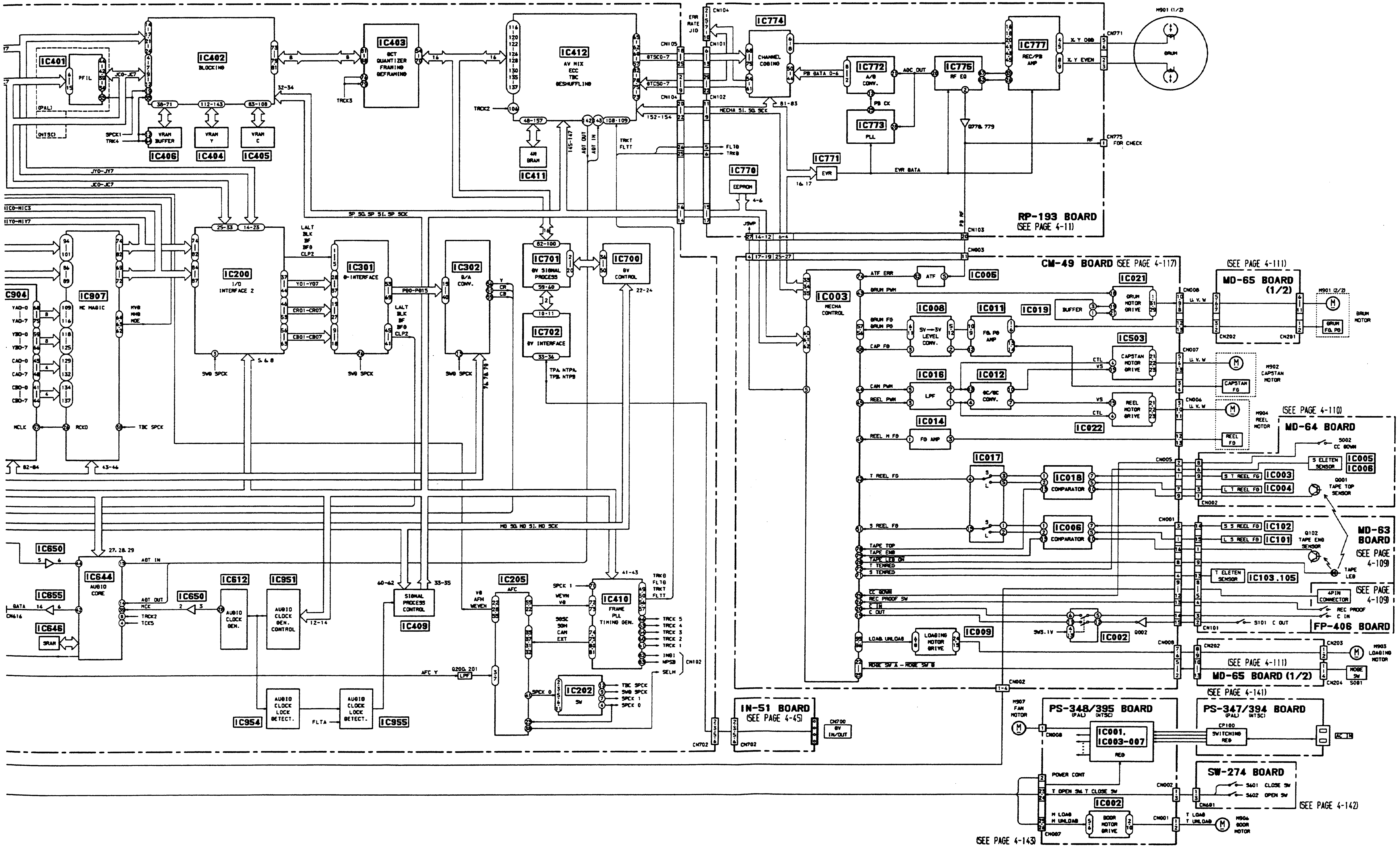
VA-99 BOARD (SEE PAGE 4-67, 72, 77, 80, 83, 87)
YC-144 BOARD (SEE PAGE 4-99)
IC001
Y, V INPUT SELECT
C INPUT SELECT
CN003
CN001
FL201 LPF
AMP
IC009
Y/C SEP
S902 EXTERNAL TIMER
S901 FUNCTION LOCK
J907 ONE PGM PLAY TRIGGER
IC016
SYNC SEP
Y/C MIX
IC017
VIDEO BUFFER
IC015
CHARACTER GENERATOR
X004 14.318MHz (NTSC) 17.734MHz (PAL)
J901
S VIDEO
J906
VIDEO
AUDIO L
AUDIO R
LINE 1 OUT
(SEE PAGE 4-92)
FJ-19 BOARD
J801
J802
LINE 2 IN
L (MONO)
R
IC850
J880
LANC
CN905
CN801
J904
LANC
CLAMP
TRAP
IC018
IC019
X005 3.58MHz (NTSC) 4.43MHz (PAL)
IC778
SW
OSD SI, OSD SCK
IC701
SIRCS SW
J903 CONTROL S IN
J905 CONTROL S OUT
IC619
EMPH AMP
EMPH SW
IC602
IC603
IC618
IC507
LINE 1 IN
LINE 2 OUT
MIC SIO
TB-30 BOARD (SEE PAGE 4-131)
DC200
UNI4V
DC/DC CONV
CN200
FM-26 BOARD (SEE PAGE 4-125)
CN503
IC502
EEPROM
IC501
TIMER/TUNER CONTROL
-27.5V
DC 0V
DC 5.4V
X501 32kHz
X502 10MHz
FL501
FLUORESCENT DISPLAY
IC580
LED DRIVE
D570
D589
IC503
RESET
S501
TT SO, TT SI, TT SCK
MODE SO, MODE SI, MODE SCK
SIRCS
KAB IND
CN501
CN502
(SEE PAGE 4-125)
FL-69 BOARD
IC251
REMOTE CONTROL RECEIVER
S201 POWER
CN201
TRAY
S201 TRAY OPEN/CLOSE
TRAY OPEN SW1
TRAY CLOSE SW1
IC201
TRAY MOTOR DRIVE
TRAY OPEN
TRAY CLOSE
M905 TRAY MOTOR
CN203
(SEE PAGE 4-134)
CN-93 (PAL)
CN-105 (NTSC)
BOARD
CN501
CN502
CN201
(SEE PAGE 4-134)
TK-37 BOARD (PAL)
TK-42 BOARD (NTSC)
CN202
(SEE PAGE 4-105)
HP-91 BOARD
IC350
MIC AMP
J350 MIC (PLUG IN POWER)
J301 PHONES
HEADPHONE AMP
IC301
RV301
CN301
CN701
CN702
SIRCS
KAB IN 1
KAB IN 0
TRAY OPEN SW
TRAY CLOSE SW
TRAY OPEN
TRAY CLOSE
SI SO SCK CS
09


VA-99 BOARD (SEE PAGE 4-67, 72, 77, 80, 83, 87)
YC-144 BOARD (SEE PAGE 4-99)
(SEE PAGE 4-92)
FJ-19 BOARD
(SEE PAGE 4-105)
HP-91 BOARD
IC001
Y, V INPUT SELECT
C INPUT SELECT
IC009
Y/C SEP
Y AMP
C AMP
FL201 LPF
AMP
IC207
IC208
FL203 LPF
FL202 BPF
CN001
CN003
CN005
IC003
Y AGC
FL001, 002 LPF
IC006
NTSC/PAL DECODER
FL003 LPF
FL004 LPF
X001 3.58MHz (NTSC) 4.43MHz (PAL)
CN002
AFC Y
REC Y
REC CR
REC CB
S902 EXTERNAL TIMER
S901 FUNCTION LOCK
J907 ONE PGM PLAY TRIGGER
IC018
SYNC SEP
Y/C MIX
IC017
VIDEO BUFFER
IC015
CHARACTER GENERATOR
X004 14.318MHz (NTSC) 17.734MHz (PAL)
J901 S VIDEO
J906 VIDEO
AUDIO L
AUDIO R
LINE 1 OUT
LINE 1 IN
LINE 2 IN
LINE 2 OUT
IC013
IC014
EE
PB
IC011
NTSC/PAL ENCODER
PB Y
PB CR
PB CB
X002 14.318MHz (NTSC) 17.734MHz (PAL)
NPS
IC012
SEL M
NPS B
NPS A
LALT
BLK
BF
BFG
CLP2
J801 S VIDEO
J802 VIDEO
L (MONO)
R
IC850
CN905
CN801
LANC
J880 LANC
J904 LANC
CLAMP
TRAP
IC018
IC019
SI SO SCK CS
X005 3.58MHz (NTSC) 4.43MHz (PAL)
CN903
MODE SO, MODE SI, MODE SCK
HI SO, HI SI, HI SCK
IC778
SW
OSD SI, OSD SCK
IC701
SIRCS SW
J903 CONTROL S IN
J905 CONTROL S OUT
IC619
IC602
IC603
IC618
IC407
EMPH AMP
IC623
EMPH SW
IC507
IC625
ATT
IC626
IC624
A/D PRE AMP
CN401
L+, L-
R+, R-
IC807
AUDIO CONTROL
DATA, CLK
IC615
IC401
IC501
IC627
MUTE
IC616
IC350
MIC AMP
CN301
IC301
HEADPHONE AMP
RV301
MIC SIG
IC021
EVR
IC776, 779-782
5V/3V CONV
EVR DI, EVR CK
IC702
MODE CONTROL
ONE SHOT REPEAT
AC ON REC
AC ON REPEAT
FUNCTION LOCK
EEPROM
IC703
IC801
HI CONTROL
IC775
IC777
5V/3V CONV
IC871
CN701
TT SO, TT SI, TT SCK
MODE SO, MODE SI, MODE SCK
SIRCS
KAB IN 1
KAB IN 0
IC770
LANC I/O
LANC IN
LANC OUT
POWER CONT
CN702
TRAY OPEN SW
TRAY CLOSE SW
TRAY OPEN
TRAY CLOSE
CN870
CN901
T OPEN SW
T CLOSE SW
T OPEN
T CLOSE
A
B
C
D
E

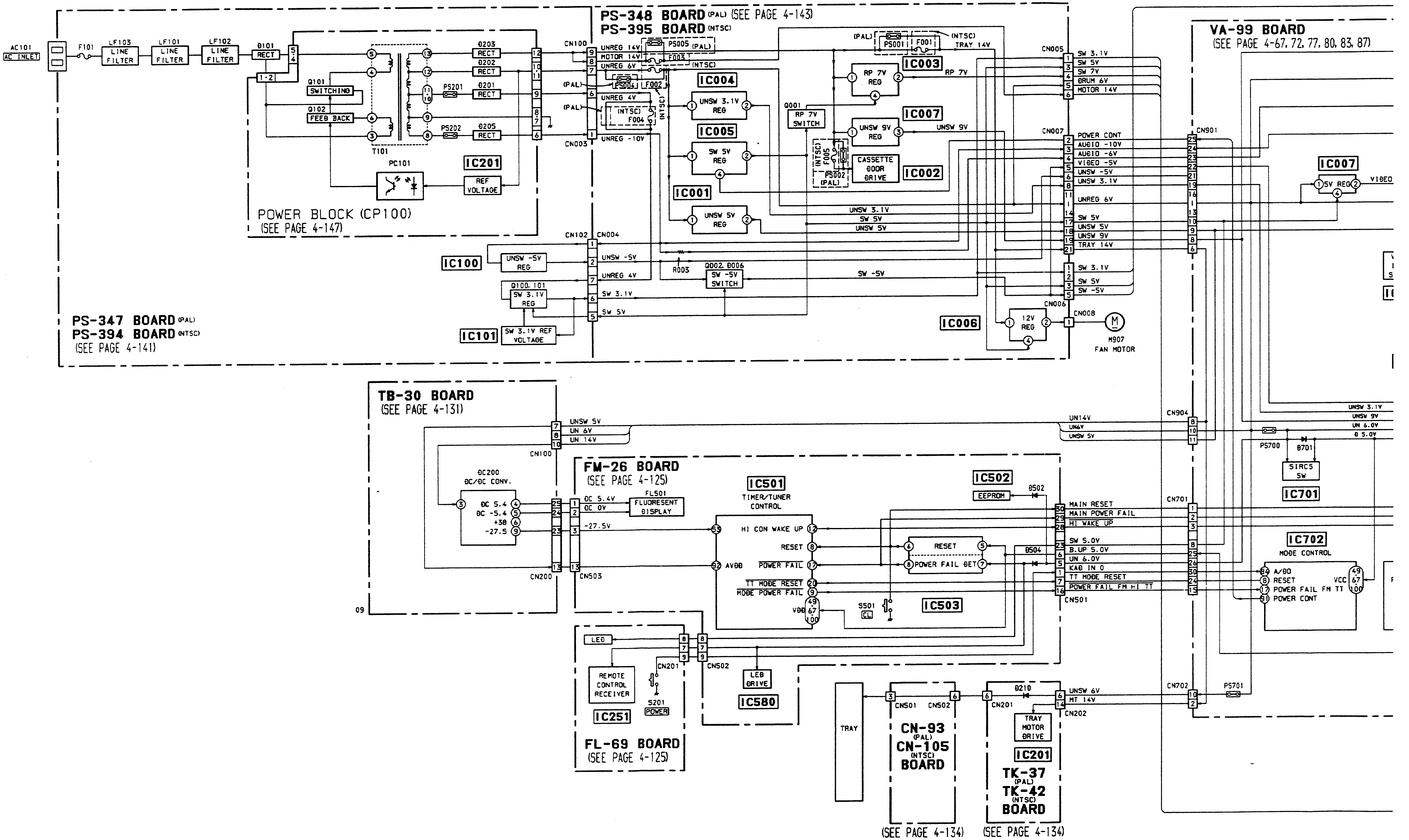
CONTINUED ON NEXT PAGE 3-4

3-2. OVERALL BLOCK DIAGRAM (2)

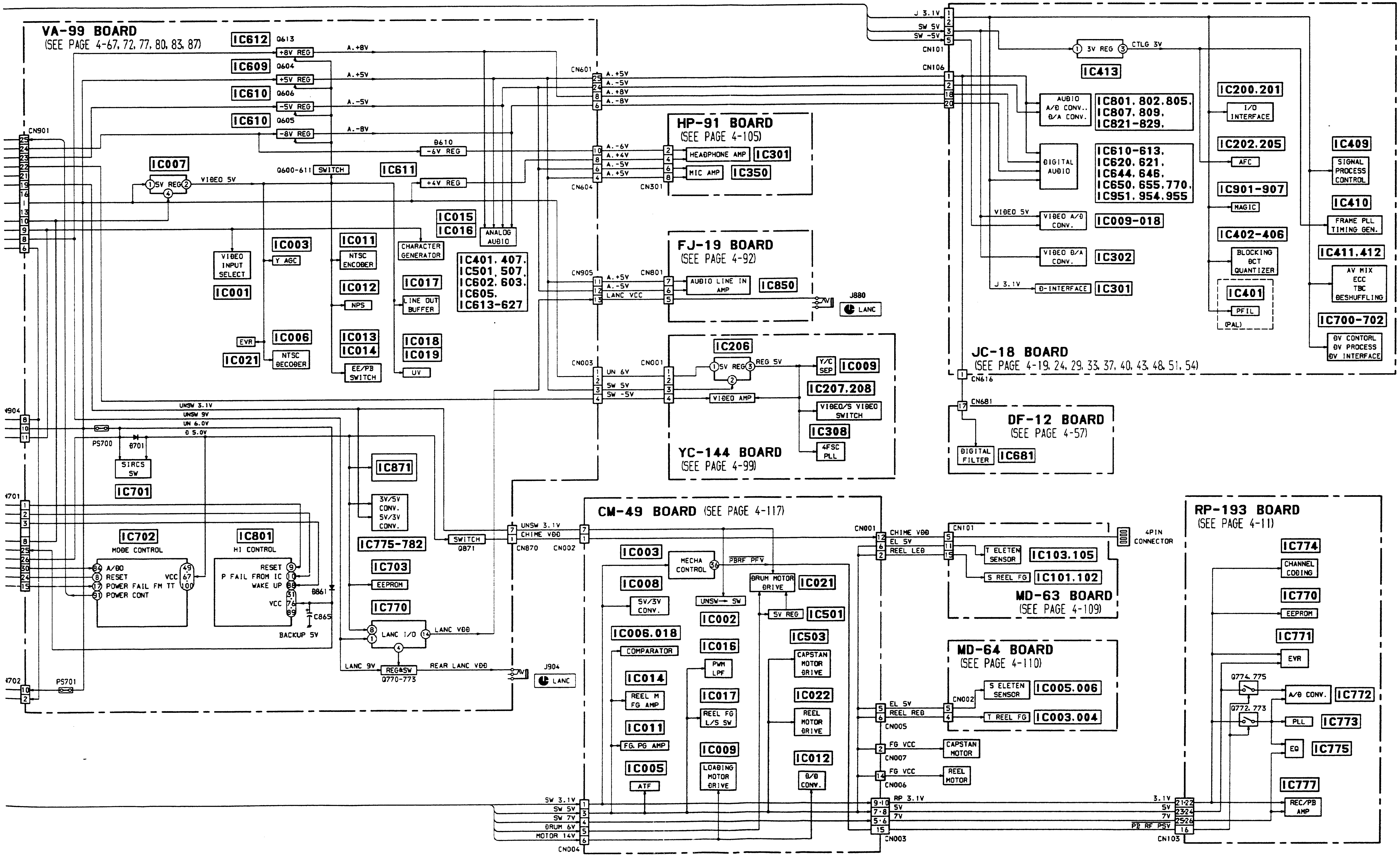

JC-18 BOARD (SEE PAGE 4-19, 24, 29, 33, 37, 40, 43, 48, 51, 54)
CN102
CN103
CN616
CONTINUED ON NEXT PAGE 3-3
Ⓐ
Ⓑ
Ⓒ
Ⓓ
Ⓔ
Q028-037 CLAMP
CLAMP
CLAMP
IC017 Y A/D CONV.
IC016 CR A/D CONV.
IC015 CB A/D CONV.
IC014 REG
IC009 REF SC GEN.
IC013
IC018
TEST SW
SPCKO
Y0-Y7
CR0-CR7
CB0-CB7
IC201 I/O INTERFACE 1
VD AFH WEVEN
MHD MVD MOE
JY0-JY7
JC0-JC7
IC401 PFIL
(PAL)
(NTSC)
IC402 BLOCKING
SPCK1
TRCK4
IC406 VRAM BUFFER
IC404 VRAM Y
IC405 VRAM C
IC403 DCT QUANTIZER FRAMING DEFRAMING
TRCK3
IC412 AV MIX ECC TBC DESHUFFLING
TRCK2
IC411 4M DRAM
ADT OUT
ADT IN
DTSC0-7
DTCS0-7
TRKT FLTT
ERR RATE J10
CN104
CN105
CN101
IC774 CHANNEL CODING
PB DATA 0-6
IC772 A/D CONV.
IC773 PLL
IC771 EVR
IC770 EEPROM
MECHA SI, SO, SCK
FLTD TRKD
Q040, 045 FL101 LPF Y
Q042, 046 FL102 LPF CR
Q044, 047 FL103 LPF CB
SEL H (IC205)
MPS B (IC410)
IN BI (IC410)
Y CLP ERR
CR CLP ERR
CB CLP ERR
MO SO, MO SI, MO SCK
HI SO, HI SI, HI SCK
MICO-MIC3
MIY0-MIY7
MIY0-MIY7
MIC0-MIC3
IC901 PF MAGIC
IC902 2.4M VRAM Y
IC905 2.4M VRAM Y
IC903 1.2M VRAM C
IC906 1.2M VRAM C
IC904
YA0-0 YA0-7 YB0-0 YB0-7 CA0-0 CA0-7 CB0-0 CB0-7
MCLK
IC907 MC MAGIC
RCKO
TBC SPCK
IC200 I/O INTERFACE 2
LALT BLK BF BFD CLP2
Y01-Y07
CR01-CR07
CB01-CB07
SWD SPCK
IC301 D-INTERFACE
PD0-PD15
IC302 D/A CONV.
Y CR CB
IC701 DV SIGNAL PROCESS
IC702 DV INTERFACE
TPA, NTPA, TPB, NTPB
IC700 DV CONTROL
IC003 MECHA CONTROL
ATF ERR
DRUM
DRUM FG
DRUM PG
CAP FG
CAM PWM
REEL PWM
REEL M
T REEL
S REEL
TAPE TOP
TAPE END
TAPE LED
T TEMP
S TEMP
CC DOWN
REC PROOF
C IN
C OUT
LOAD
MODE SW
IC802 AUDIO A/D CONV.
AD DATA
SP SO, SP SI, SP SCK
MD SO, MD SI, MD SCK
IC821
IC822
IC829
IC809, IC823-828 FILTER
IC807 LPF
IC805 AUDIO D/A CONV.
MCK
DATA
CN616
CN681
(SEE PAGE 4-57)
IC681 DIGITAL FILTER
DF-12 BOARD
IC610 AUDIO CONTROL
A.S DATA-JC, A.S CLK
IC650
IC855
IC646 SRAM
IC644 AUDIO CORE
ADT IN
ADT OUT
MCK TRCK2 TCKS
IC650
IC612 AUDIO CLOCK GEN.
IC951 AUDIO CLOCK GEN. CONTROL
IC954 AUDIO CLOCK LOCK DETECT.
IC955 AUDIO CLOCK LOCK DETECT.
FLTA
IC409 SIGNAL PROCESS CONTROL
IC205 AFC
VD AFH WEVEN
AFC Y
Q200, 201 LPF
SPCK 1 WEVN VD
SOSC 30H CAM EXT
IC410 FRAME PLL TIMING GEN.
TRKD FLTD TRKT FLTT
TRCK 5 TRCK 4 TRCK 3 TRCK 2 TRCK 1
INDI NPSD
SELM
CN102
IC202 SW
TBC SPCK SWD SPCK SPCK 1 SPCK 0
IN-51 BOARD (SEE PAGE 4-45)
CN702
CN700 DV IN/OUT


IC401
PFIL
(PAL)
(NTSC)
IC402
BLOCKING
IC406
VRAM BUFFER
IC404
VRAM Y
IC405
VRAM C
IC403
DCT QUANTIZER FRAMING DEFRAMING
TRCK3
IC412
AV MIX ECC TBC DESHUFFLING
TRCK2
4M DRAM
IC411
IC774
CHANNEL CODING
IC772
A/D CONV.
IC773
PLL
IC776
RF EQ
IC777
REC/PB AMP
IC771
EVR
IC770
EEPROM
M901 (1/2)
DRUM
CN771
CN775
FOR CHECK
RP-193 BOARD
(SEE PAGE 4-11)
IC907
MC MAGIC
IC904
IC200
I/O INTERFACE 2
IC301
D-INTERFACE
IC302
D/A CONV.
IC701
DV SIGNAL PROCESS
IC700
DV CONTROL
IC702
DV INTERFACE
CM-49 BOARD (SEE PAGE 4-117)
IC005
ATF
IC003
MECHA CONTROL
IC021
DRUM MOTOR DRIVE
IC019
BUFFER
IC008
5V→3V LEVEL CONV.
IC011
FG PG AMP
IC503
CAPSTAN MOTOR DRIVE
IC016
LPF
IC012
DC/DC CONV.
REEL MOTOR DRIVE
IC022
IC014
FG AMP
IC017
IC018
COMPARATOR
IC006
COMPARATOR
IC009
LOADING MOTOR DRIVE
IC002
MD-65 BOARD (1/2)
(SEE PAGE 4-111)
DRUM MOTOR
M902 CAPSTAN MOTOR
M904 REEL MOTOR
MD-64 BOARD
(SEE PAGE 4-110)
S ELETEN SENSOR
IC005
IC008
T REEL FG
IC003
L T REEL FG
IC004
TAPE TOP SENSOR
S S REEL FG
IC102
L S REEL FG
IC101
MD-63 BOARD
(SEE PAGE 4-109)
TAPE END SENSOR
TAPE LED
T ELETEN SENSOR
IC103,105
4PIN CONNECTOR
REC PROOF
C IN
S101 C OUT
FP-406 BOARD
(SEE PAGE 4-109)
M903 LOADING MOTOR
MODE SW S001
(SEE PAGE 4-111)
MD-65 BOARD (1/2)
IC650
IC644
AUDIO CORE
IC655
IC646
SRAM
IC612
AUDIO CLOCK GEN.
IC951
AUDIO CLOCK GEN. CONTROL
IC409
SIGNAL PROCESS CONTROL
IC205
AFC
IC410
FRAME PLL TIMING GEN.
IC202
SW
IC954
AUDIO CLOCK LOCK DETECT.
IC955
AUDIO CLOCK LOCK DETECT.
IN-S1 BOARD
(SEE PAGE 4-45)
CN700 DV IN/OUT
M907 FAN MOTOR
PS-348/395 BOARD
(PAL) (NTSC)
IC001, IC003-007
REG
POWER CONT
IC002
DOOR MOTOR DRIVE
(SEE PAGE 4-143)
PS-347/394 BOARD
(PAL) (NTSC)
SWITCHING REG
AC IN
(SEE PAGE 4-141)
SW-274 BOARD
S601 CLOSE SW
S602 OPEN SW
(SEE PAGE 4-142)
M906 DOOR MOTOR

3-3. POWER BLOCK DIAGRAM

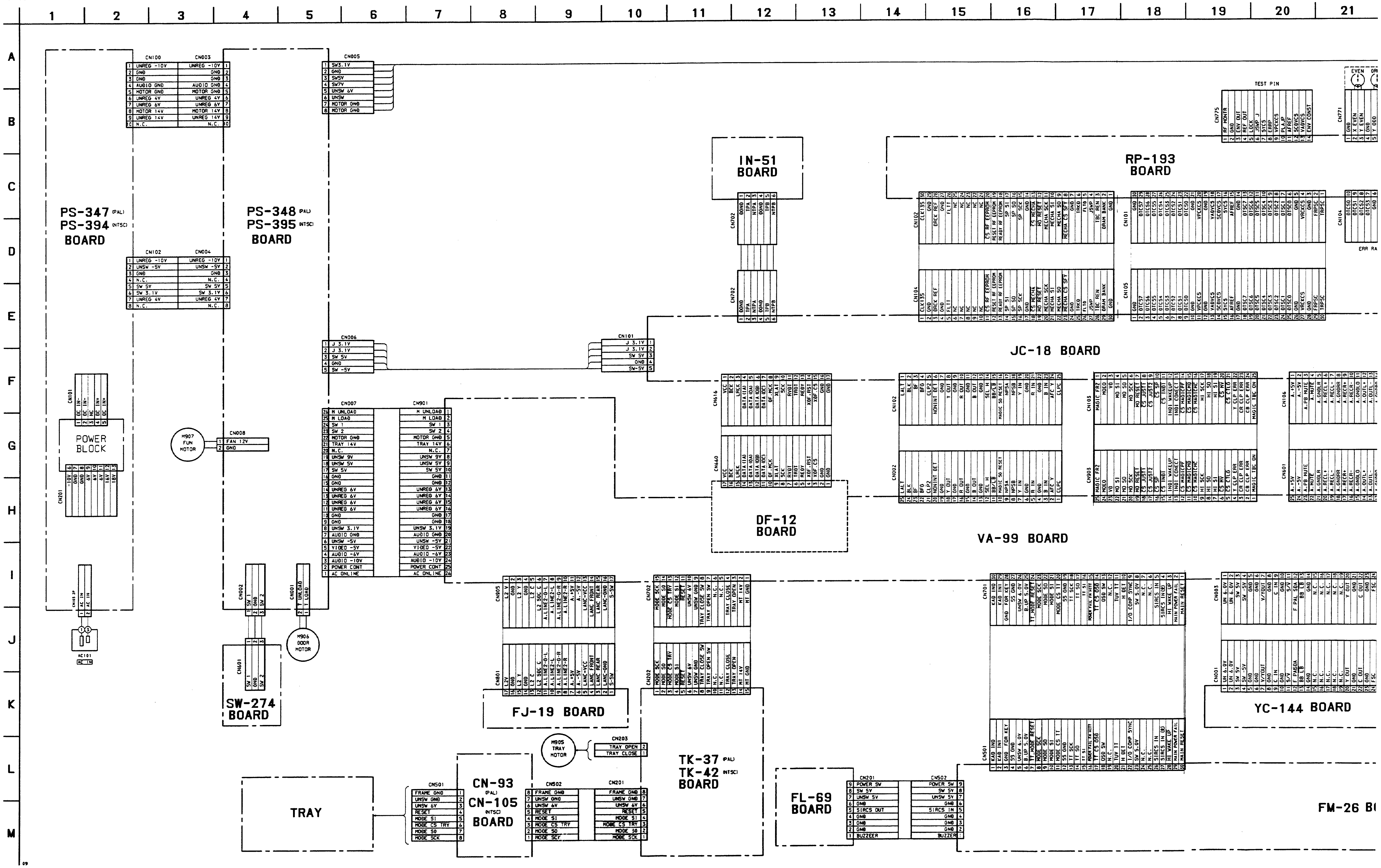


AC101
AC INLET
F101
LF103 LINE FILTER
LF101 LINE FILTER
LF102 LINE FILTER
D101 RECT
Q101 SWITCHING
Q102 FEED BACK
T101
PC101
IC201 REF VOLTAGE
D203 RECT
D202 RECT
D201 RECT
D205 RECT
PS201
PS202
POWER BLOCK (CP100)
(SEE PAGE 4-147)
CN100
CN003
CN102
PS-347 BOARD (PAL)
PS-394 BOARD (NTSC)
(SEE PAGE 4-141)
IC100 UNSW -5V REG
Q100, 101 SW 3.1V REG
IC101 SW 3.1V REF VOLTAGE
PS-348 BOARD (PAL) (SEE PAGE 4-143)
PS-395 BOARD (NTSC)
UNREG 14V
MOTOR 14V
UNREG 6V
UNREG 4V
UNREG -10V
PS005 (PAL)
F003
F002
PS004
F004
(NTSC)
IC004 UNSW 3.1V REG
IC005 SW 5V REG
IC001 UNSW 5V REG
Q001 RP 7V SWITCH
F005
PS002 (PAL)
PS001
F001
IC003 RP 7V REG
RP 7V
IC007 UNSW 9V REG
UNSW 9V
IC002 CASSETTE DOOR DRIVE
TRAY 14V
CN004
UNSW -5V
UNREG 4V
SW 3.1V
SW 5V
R003
Q002, D006 SW -5V SWITCH
SW -5V
UNSW 3.1V
UNSW 5V
CN005
SW 3.1V
SW 5V
SW 7V
DRUM 6V
MOTOR 14V
CN007
POWER CONT
AUDIO -10V
AUDIO -6V
VIDEO -5V
UNSW -5V
UNSW 3.1V
UNREG 6V
SW 5V
UNSW 5V
UNSW 9V
TRAY 14V
SW 3.1V
SW 5V
SW -5V
CN006
IC006 12V REG
CN008
M907 FAN MOTOR
VA-99 BOARD
(SEE PAGE 4-67, 72, 77, 80, 83, 87)
CN901
IC007 5V REG
VIDEO
TB-30 BOARD
(SEE PAGE 4-131)
UNSW 5V
UN 6V
UN 14V
CN100
DC200 DC/DC CONV.
DC 5.4
DC -5.4
+38
-27.5
CN200
09
FM-26 BOARD
(SEE PAGE 4-125)
FL501 FLUORESENT DISPLAY
DC 5.4V
DC 0V
-27.5V
CN503
IC501 TIMER/TUNER CONTROL
HI CON WAKE UP
RESET
AVDD
POWER FAIL
TT MODE RESET
MODE POWER FAIL
VDD
S501
IC502 EEPROM
D502
D504
IC503 RESET POWER FAIL DET
CN501
MAIN RESET
MAIN POWER FAIL
HI WAKE UP
SW 5.0V
B.UP 5.0V
UN 6.0V
KAD IN 0
TT MODE RESET
POWER FAIL FM HI TT
CN502
LED
IC580 LED DRIVE
FL-69 BOARD
(SEE PAGE 4-125)
REMOTE CONTROL RECEIVER
IC251
CN201
S201 POWER
TRAY
CN-93 (PAL)
CN-105 (NTSC)
BOARD
CN501
CN502
(SEE PAGE 4-134)
TK-37 (PAL)
TK-42 (NTSC)
BOARD
CN201
D210
TRAY MOTOR DRIVE
IC201
CN202
UNSW 6V
MT 14V
(SEE PAGE 4-134)
CN904
UN14V
UN6V
UNSW 5V
UNSW 3.1V
UNSW 9V
UN 6.0V
D 5.0V
PS700
D701
SIRCS SW
IC701
CN701
IC702 MODE CONTROL
A/DD
RESET
POWER FAIL FM TT
POWER CONT
VCC
CN702
PS701


VA-99 BOARD
(SEE PAGE 4-67, 72, 77, 80, 83, 87)
IC612
Q613
+8V REG
A.+8V
IC609
Q604
+5V REG
A.+5V
IC610
Q606
-5V REG
A.-5V
IC610
Q605
-8V REG
A.-8V
CN901
Q610
-6V REG
IC007
5V REG
VIDEO 5V
Q600-611
SWITCH
IC611
+4V REG
IC015
IC016
ANALOG AUDIO
CHARACTER GENERATOR
VIDEO INPUT SELECT
IC001
IC003
Y AGC
IC011
NTSC ENCODER
IC012
NPS
IC017
LINE OUT BUFFER
IC401, 407,
IC501, 507,
IC602, 603,
IC605,
IC613-627
EVR
IC006
IC021
NTSC DECODER
IC013
IC014
EE/PB SWITCH
IC018
IC019
UV
CN601
A.+5V
A.-5V
A.+8V
A.-8V
A.-6V
A.+4V
A.-5V
A.+5V
CN604
CN905
CN801
A.+5V
A.-5V
LANC VCC
CN003
CN001
UN 6V
SW 5V
SW -5V
UNSW 3.1V
UNSW 9V
UN 6.0V
D 5.0V
904
PS700
D701
SIRCS SW
IC701
IC871
3V/5V CONV.
5V/3V CONV.
IC775-782
SWITCH
Q871
IC703
EEPROM
IC770
LANC I/O
LANC VDD
LANC 9V
REG&SW
Q770-773
REAR LANC VDD
J904
LANC
701
IC702
MODE CONTROL
A/D
RESET
POWER FAIL FM TT
POWER CONT
VCC
IC801
HI CONTROL
RESET
P FAIL FROM IC
WAKE UP
VCC
D861
C865
BACKUP 5V
702
PS701
HP-91 BOARD
(SEE PAGE 4-105)
HEADPHONE AMP
IC301
MIC AMP
IC350
CN301
FJ-19 BOARD
(SEE PAGE 4-92)
AUDIO LINE IN AMP
IC850
J880
LANC
IC206
5V REG
REG 5V
Y/C SEP
IC009
IC207,208
VIDEO AMP
VIDEO/S VIDEO SWITCH
IC308
4FSC PLL
YC-144 BOARD
(SEE PAGE 4-99)
J 3.1V
SW 5V
SW -5V
CN101
CN106
3V REG
CTLG 3V
IC413
AUDIO A/D CONV., D/A CONV.
IC801, 802, 805,
IC807, 809,
IC821-829,
DIGITAL AUDIO
IC610-613,
IC620, 621,
IC644, 646,
IC650, 655, 770,
IC951, 954, 955
VIDEO 5V
VIDEO A/D CONV.
IC009-018
VIDEO D/A CONV.
IC302
J 3.1V
D-INTERFACE
IC301
IC200, 201
I/O INTERFACE
IC202, 205
AFC
IC901-907
MAGIC
IC402-406
BLOCKING DCT QUANTIZER
IC401
PFIL
(PAL)
IC409
SIGNAL PROCESS CONTROL
IC410
FRAME PLL TIMING GEN.
IC411, 412
AV MIX ECC TBC DESHUFFLING
IC700-702
DV CONTORL
DV PROCESS
DV INTERFACE
JC-18 BOARD
(SEE PAGE 4-19, 24, 29, 33, 37, 40, 43, 48, 51, 54)
CN616
CN681
DF-12 BOARD
(SEE PAGE 4-57)
DIGITAL FILTER
IC681
CM-49 BOARD (SEE PAGE 4-117)
UNSW 3.1V
CHIME VDD
CN870
CN002
IC003
MECHA CONTROL
PBRF PFV
DRUM MOTOR DRIVE
IC021
IC008
5V/3V CONV.
UNSW→SW
IC002
5V REG
IC501
IC006, 018
COMPARATOR
IC016
PWM LPF
IC503
CAPSTAN MOTOR DRIVE
IC014
REEL M FG AMP
IC017
REEL FG L/S SW
IC022
REEL MOTOR DRIVE
IC011
FG, PG AMP
IC009
LOADING MOTOR DRIVE
IC005
ATF
IC012
D/D CONV.
SW 3.1V
SW 5V
SW 7V
DRUM 6V
MOTOR 14V
CN004
CN001
CHIME VDD
EL 5V
REEL LED
CN101
4PIN CONNECTOR
T ELETEN SENSOR
IC103, 105
S REEL FG
IC101, 102
MD-63 BOARD
(SEE PAGE 4-109)
MD-64 BOARD
(SEE PAGE 4-110)
CN002
S ELETEN SENSOR
IC005, 006
T REEL FG
IC003, 004
EL 5V
REEL RED
CN005
FG VCC
CN007
CAPSTAN MOTOR
FG VCC
CN006
REEL MOTOR
RP 3.1V
5V
7V
CN003
RP-193 BOARD
(SEE PAGE 4-11)
IC774
CHANNEL CODING
IC770
EEPROM
IC771
EVR
Q774, 775
A/D CONV.
IC772
Q772, 773
PLL
IC773
EQ
IC775
IC777
REC/PB AMP
3.1V
5V
7V
PB RF PSV
CN103

PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM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21
A
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D
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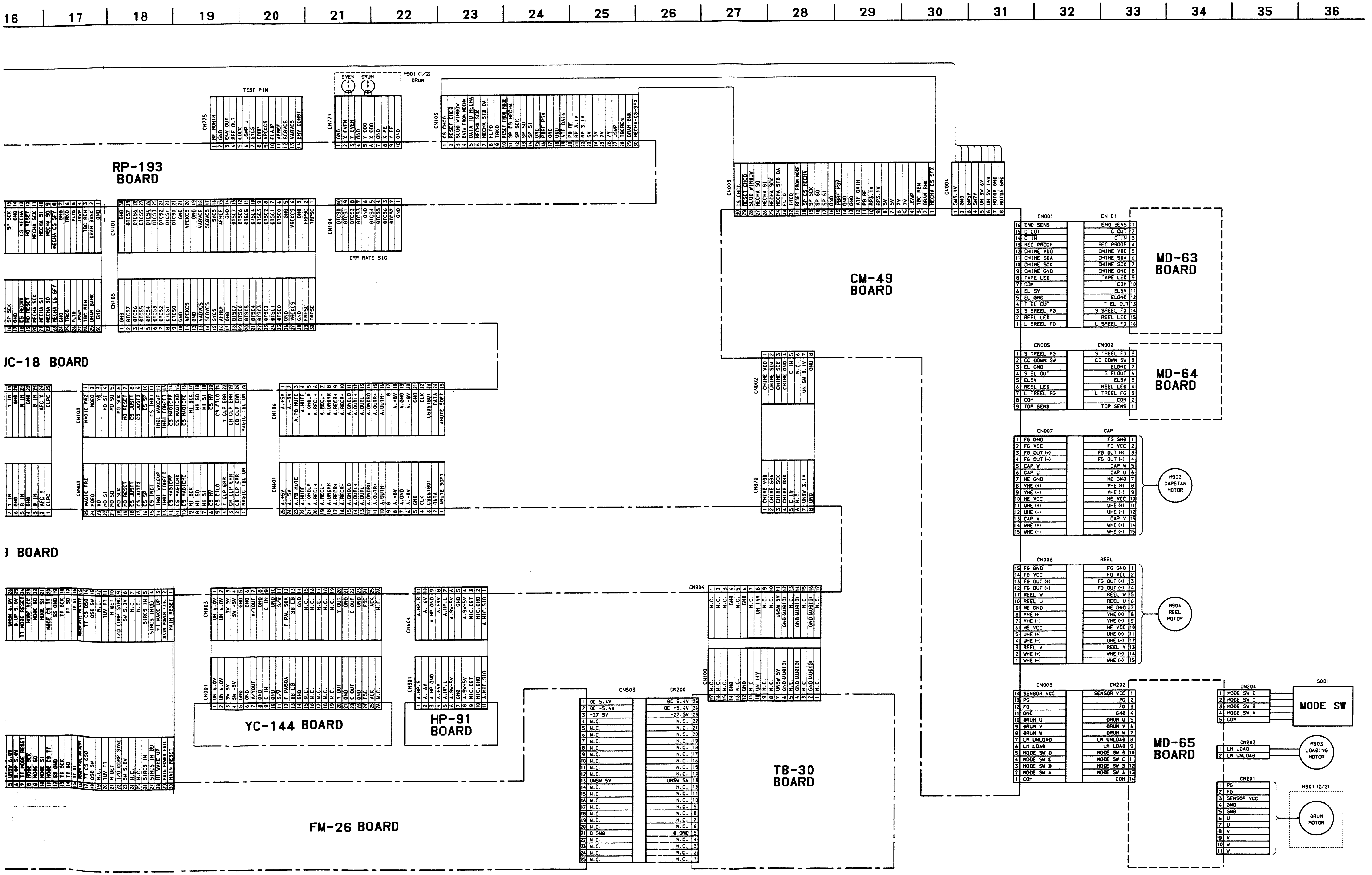
F
G
H
I
J
K
L
M
PS-347 (PAL)
PS-394 (NTSC)
BOARD
PS-348 (PAL)
PS-395 (NTSC)
BOARD
POWER BLOCK
CN100
CN003
CN102
CN004
CN005
CN006
CN007
CN008
CN901
CN101
CN201
AC101
M907 FUN MOTOR
M906 DOOR MOTOR
M905 TRAY MOTOR
SW-274 BOARD
TRAY
CN-93 (PAL)
CN-105 (NTSC)
BOARD
FJ-19 BOARD
TK-37 (PAL)
TK-42 (NTSC)
BOARD
FL-69 BOARD
IN-51 BOARD
DF-12 BOARD
RP-193 BOARD
JC-18 BOARD
VA-99 BOARD
YC-144 BOARD
FM-26 B
TEST PIN
EVEN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35
36
RP-193 BOARD
TEST PIN
CN775
CN771
EVEN
DRUM
M901 (1/2) DRUM
CN103
CN101
CN104
ERR RATE SIG
CN105
CN003
CN004
CM-49 BOARD
CN001
CN101
MD-63 BOARD
CN005
CN002
MD-64 BOARD
CN007
CAP
M902 CAPSTAN MOTOR
CN006
REEL
M904 REEL MOTOR
CN008
CN202
MD-65 BOARD
CN204
S001
MODE SW
CN203
M903 LOADING MOTOR
CN201
M901 (2/2)
DRUM MOTOR
JC-18 BOARD
CN103
CN106
CN903
CN601
CN002
CN870
B BOARD
CN904
CN003
CN604
CN001
CN301
YC-144 BOARD
HP-91 BOARD
CN503
CN200
CN100
TB-30 BOARD
FM-26 BOARD

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

- **For printed wiring boards.**
- ○—— : indicated a lead wire mounted on the component side.
- —— : indicated a lead wire mounted on the conductor side.
- ■ : Pattern from the side which enable seeing.
  (The other layer's patterns are not indicated.)
- Circled numbers refer to waveforms.

*Caution:

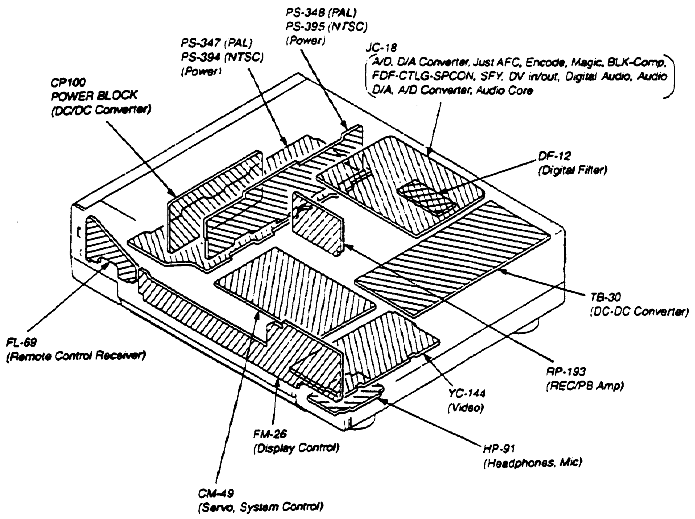
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

- **For schematic diagrams.**
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4W unless otherwise noted.
  Chip resistor are 1/10W unless otherwise noted.
  kΩ : 1000Ω, MΩ : 1000kΩ.
- All capacitors are in μF unless otherwise noted. pF: μμF.
  50 V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- ▭ : panel designation.
- △ : internal component.*
- ▭ : adjustment for repair.*
- ▬ : B+ Line*
- ▪▪▪▪ : B– Line*
- ⇨ : IN/OUT direction of (+, –) B LINE.*
- Circled numbers refer to waveforms.*
- Voltages and dc between ground and measurement points*
- Readings are taken with a color-bar signal input.*
- Readings are taken with a digital multimeter (DC 10MΩ).*
- Measure with the DV mini cassette in normal.
- Voltages are taken with a VOM (Input impedance 10MΩ).*
- Voltages variations may be noted due to normal production tolerances.*

Note:
The components identi-fied by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- *indicated by the color red.



PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

RP-193 BOARD

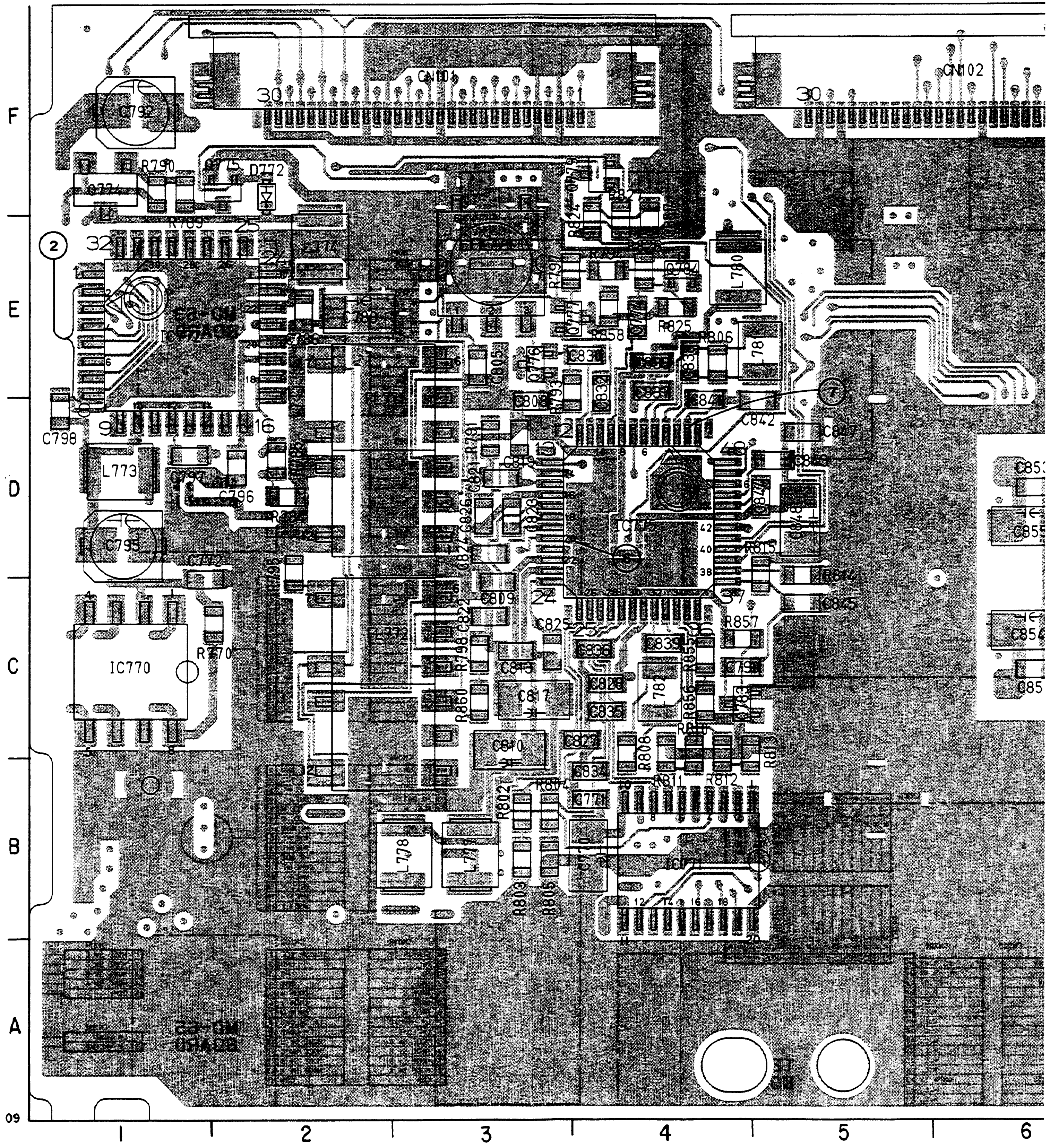
CN101	F-3
CN102	F-6
CN103	A-17
CN104	F-18
CN771	D-8
CN775	F-8
D771	B-16
D772	F-2
D773	C-17
D774	C-11
D775	D-11
D776	C-17
IC770	C-1
IC771	B-4
IC772	E-1
IC773	D-15
IC774	E-18
IC775	D-4
IC777	D-12
Q701	F-13
Q702	F-13
Q772	B-15
Q773	B-15
Q774	F-1
Q775	F-2
Q776	E-3
Q777	E-4
Q778	F-15
Q779	F-4
Q784	E-4

- For Printed Wiring Boards.
- This board is six-layer print board. However, layers 2 to 5 have not been included in the dia

RP-193 (REC/PB AMP) PRINTED WIRING BOARD

– Ref No. RP-193 BOARD: 1,000 series –

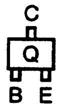
RP-193 BOARD (SIDE A)



F
E
D
C
B
A
09
1
2
3
4
5
6
CN101
CN102
30
C792
R790
D772
②
32
1
16
C798
L773
C796
C793
IC770
R770
R825
R806
C842
⑦
C857
R815
C839
C817
C810
L778
R802
R803
R808
R811
R812
R813
R856
C853
C854

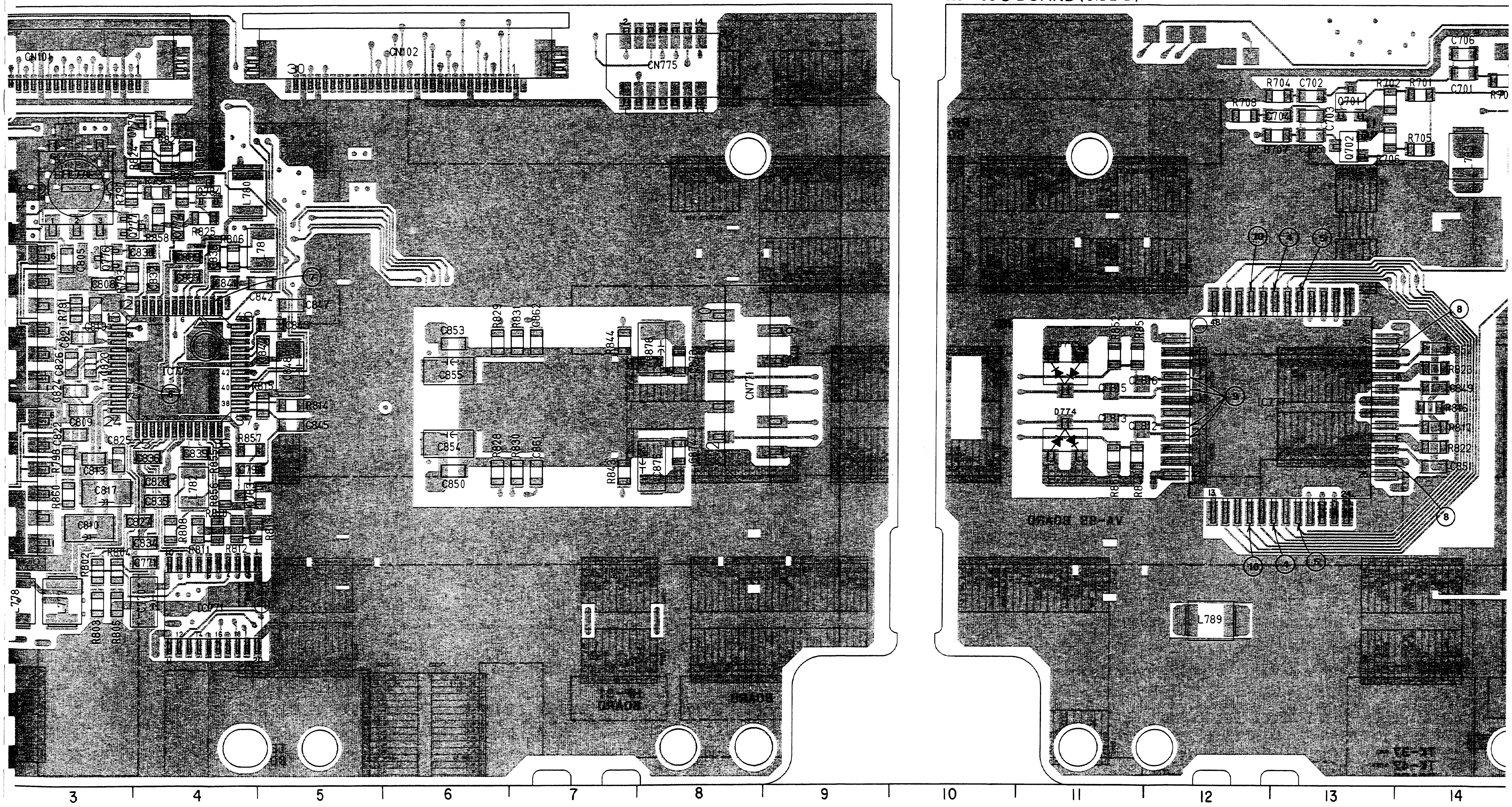
- **For Printed Wiring Boards.**
- This board is six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.

- Chip transistor



There are few cases that the part isn't mounted in this model is printed on this diagram.

RP-193 BOARD (SIDE B)


CN101
CN102
30
1
CN775
2
14
L780
L781
IC775
CN771
C853
C855
C854
C850
R829
R831
C862
R828
R830
C861
R844
C876
C847
C842
C841
R825
R806
R858
C805
C808
C809
C810
C813
C817
C825
C827
C834
C835
C836
C839
R857
R814
R815
C845
R811
R812
R808
R802
R803
R804
R805
R860
R798
R797
R791
L778
L777
R704
C702
R702
R701
C701
C706
R708
C704
C703
Q701
Q702
R705
R706
D774
C813
C812
C815
C816
IC774
R823
C849
R817
R822
C851
L789
VA-88 BOARD
8
10
4
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3
4
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6
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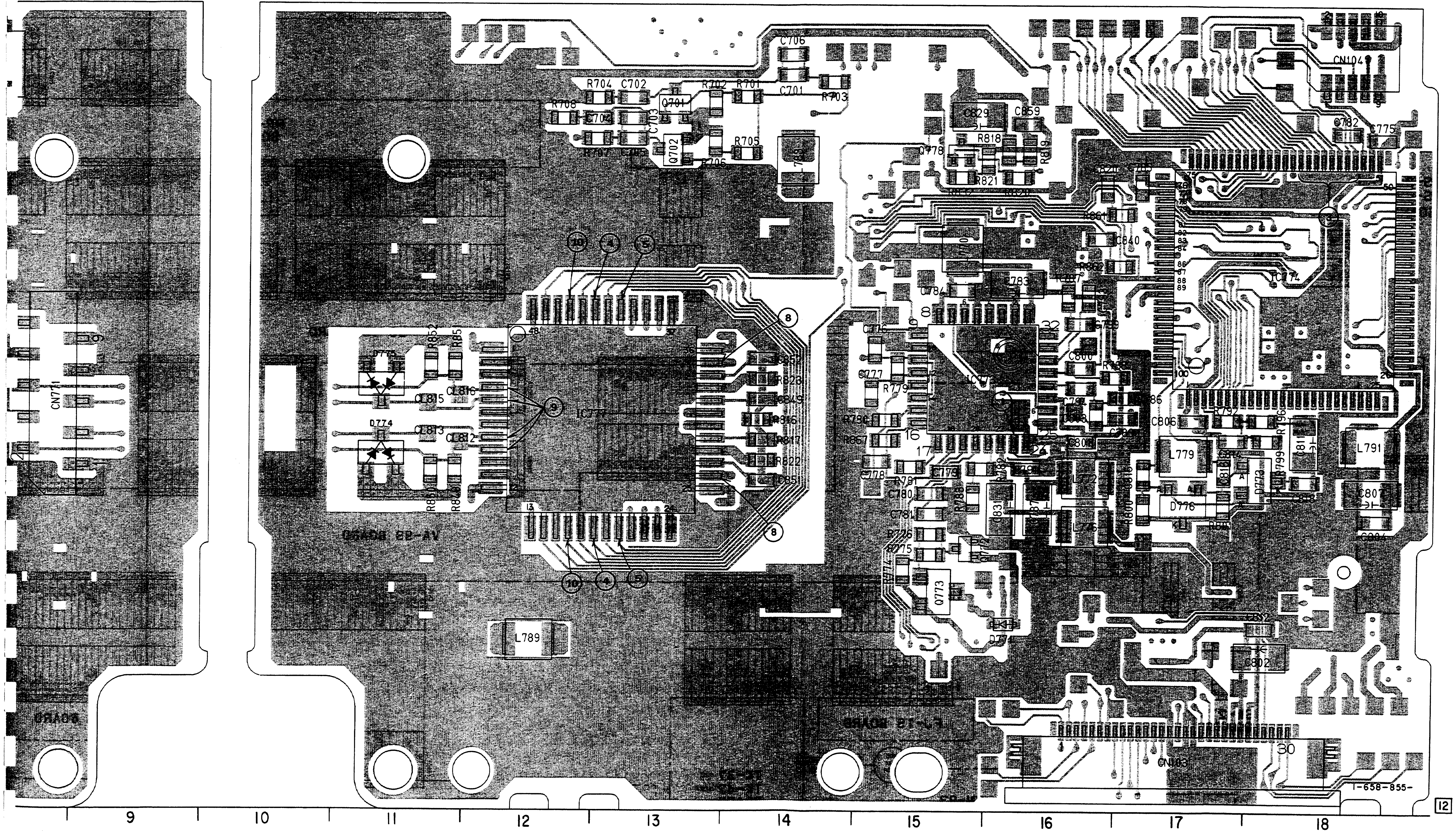
14

There are few cases that the part isn't mounted in this model is printed on this diagram.

RP-193 BOARD (SIDE B)



CN771
D774
D773
IC777
L789
IC774
IC775
CN104
CN103
L779
L791
D776
Q773
Q701
Q702
R704
C702
R702
R701
C701
R703
R705
R706
C706
C829
C859
R818
R819
R821
Q778
C840
C806
C807
C802
1-658-855-
12
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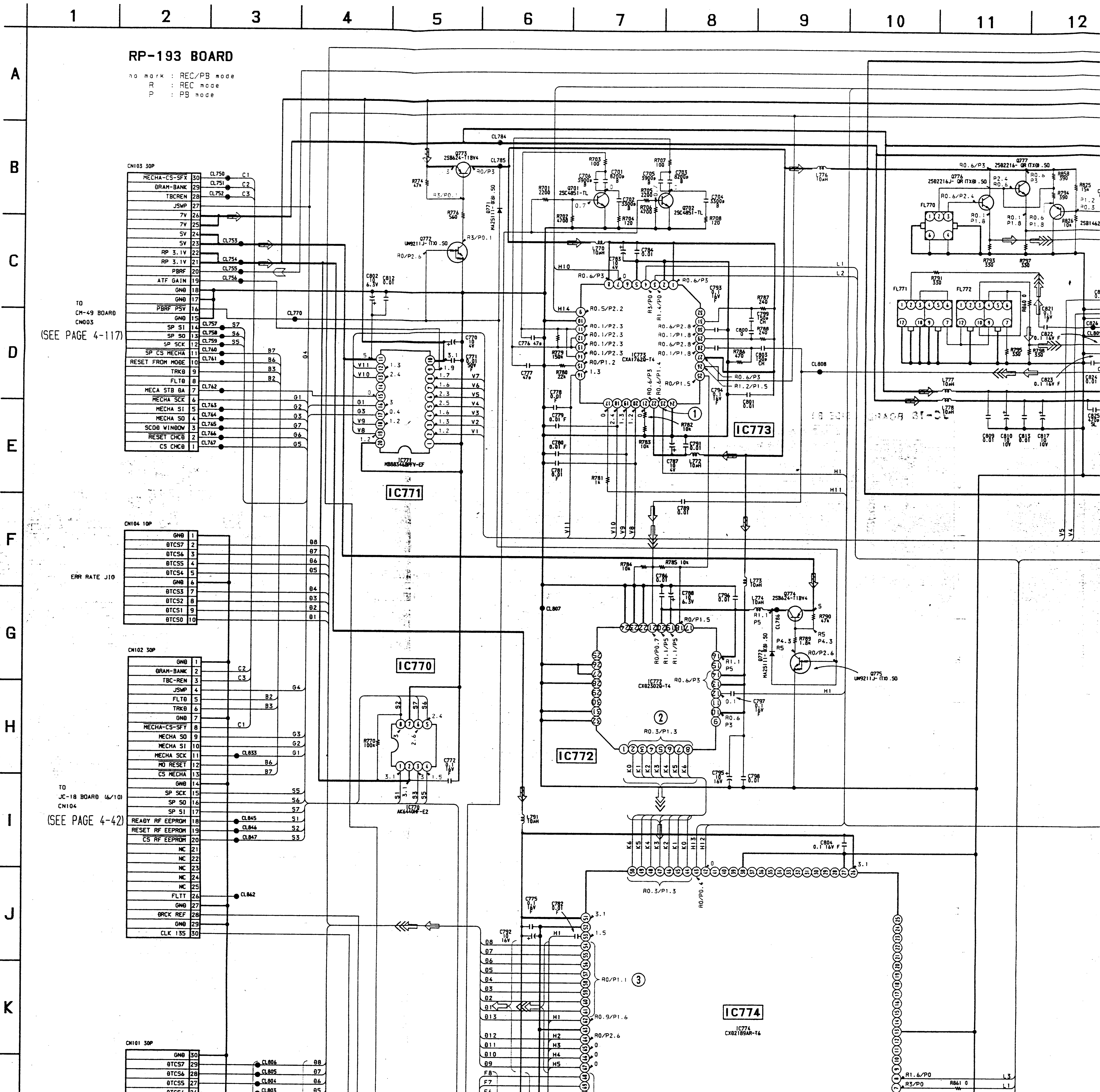
18

RP-193 (REC/PB AMP) SCHEMATIC DIAGRAM

– Ref No. RP-193 BOARD: 1,000 series –


RP-193 BOARD
no mark : REC/PB mode
R : REC mode
P : PB mode
CN103 30P
MECHA-CS-SFX 30
BRAM-BANK 29
TBCREN 28
JSWP 27
7V 26
7V 25
5V 24
5V 23
RP 3.1V 22
RP 3.1V 21
PBRF 20
ATF GAIN 19
GND 18
GND 17
PBRF PSV 16
GND 15
SP SI 14
SP SO 13
SP SCK 12
SP CS MECHA 11
RESET FROM MODE 10
TRKB 9
FLTB 8
MECA STB BA 7
MECHA SCK 6
MECHA SI 5
MECHA SO 4
SCOB WINBOW 3
RESET CHCB 2
CS CHCB 1
TO CM-49 BOARD CN003
(SEE PAGE 4-117)
CN104 10P
GND 1
BTCS7 2
BTCS6 3
BTCS5 4
BTCS4 5
GND 6
BTCS3 7
BTCS2 8
BTCS1 9
BTCS0 10
ERR RATE JIG
CN102 30P
GND 1
BRAM-BANK 2
TBC-REN 3
JSWP 4
FLTB 5
TRKB 6
GND 7
MECHA-CS-SFY 8
MECHA SO 9
MECHA SI 10
MECHA SCK 11
MD RESET 12
CS MECHA 13
GND 14
SP SCK 15
SP SO 16
SP SI 17
READY RF EEPROM 18
RESET RF EEPROM 19
CS RF EEPROM 20
NC 21
NC 22
NC 23
NC 24
NC 25
FLTT 26
GND 27
BRCK REF 28
GND 29
CLK 135 30
TO JC-18 BOARD (6/10) CN104
(SEE PAGE 4-42)
CN101 30P
GND 30
BTCS7 29
BTCS6 28
BTCS5 27
BTCS4 26
BTCS3 25
BTCS2 24
BTCS1 23
BTCS0 22
GND 21
VPCKCS 20
GND 19
VABVCS 18
SCBVCS 17
SYCS 16
AFREF 15
GND 14
BTSC7 13
BTSC6 12
BTSC5 11
BTSC4 10
BTSC3 9
BTSC2 8
BTSC1 7
BTSC0 6
GND 5
VRCKCS 4
GND 3
FRPSC 2
TRPSC 1
TO JC-18 BOARD (6/10) CN105
(SEE PAGE 4-42)
IC771
MB88346BPFV-EF
IC770
AK6440AM-E2
IC773
CXA1762Q-T4
IC772
CXB23020-T4
IC774
CXD2189AR-T6
Q773 2SB624-T1BV4
Q772 UN9211J-(TX).SO
Q771 MA2S111-(K8).SO
Q770 2SC4851-TL
Q702 2SC4851-TL
Q774 2SB624-T1BV4
Q775 UN9211J-(TX).SO
Q776 2SD2216J-QR(TX).SO
Q777 2SD2216-QR(TX).SO
FL770
FL771
FL772
R0.6/P3
R0.5/P2.2
R0.1/P2.3
R0/P1.2
R0/P1.5
R1.4/P0
R3/P0
R0.3/P1.3
R0/P1.1
R0.9/P1.6
R0/P2.6
R1.6/P0
R1.4/P0
L1
L2
L3
H1
H10
H11
H14
①
②
③
1
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3
4
5
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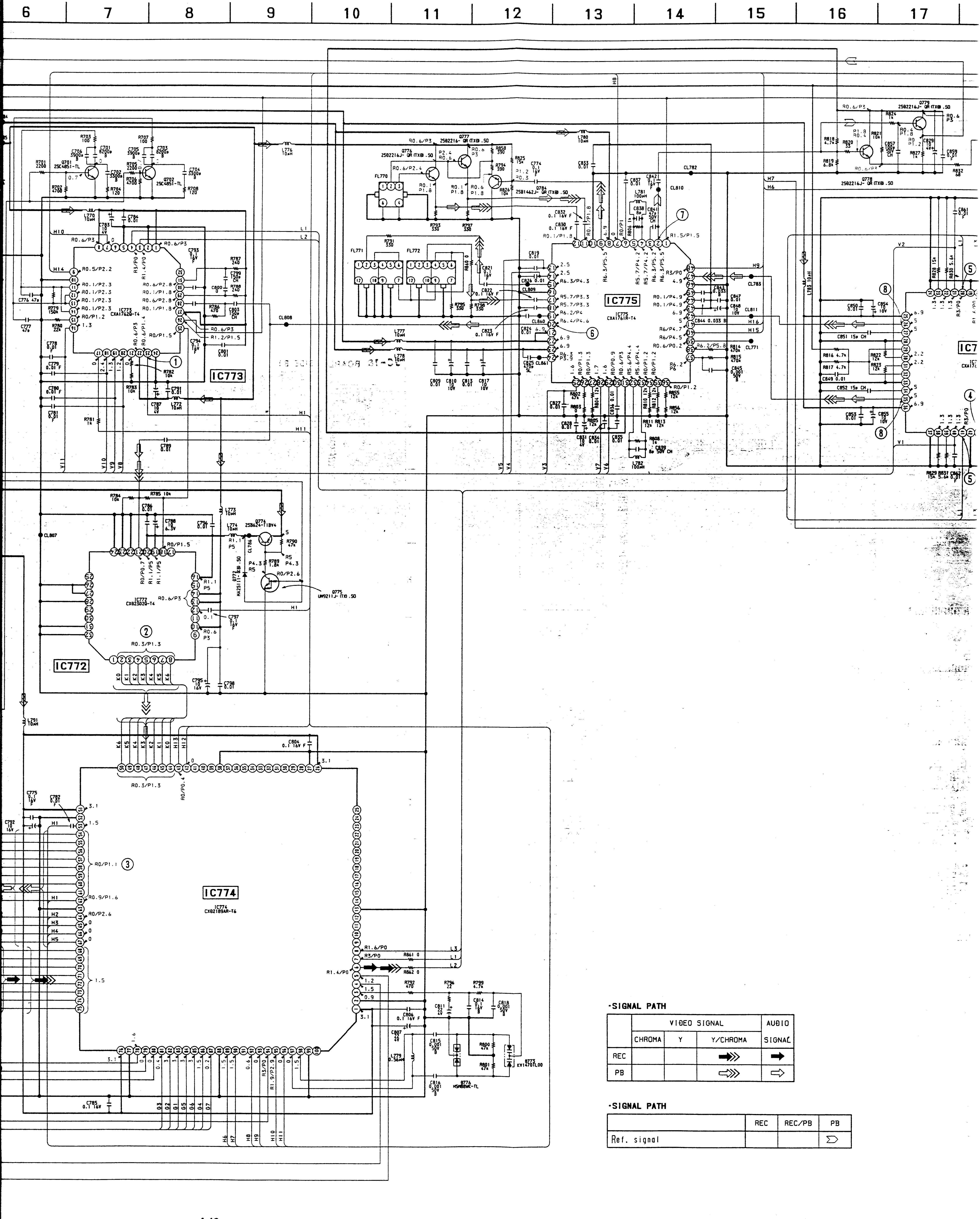
N


6
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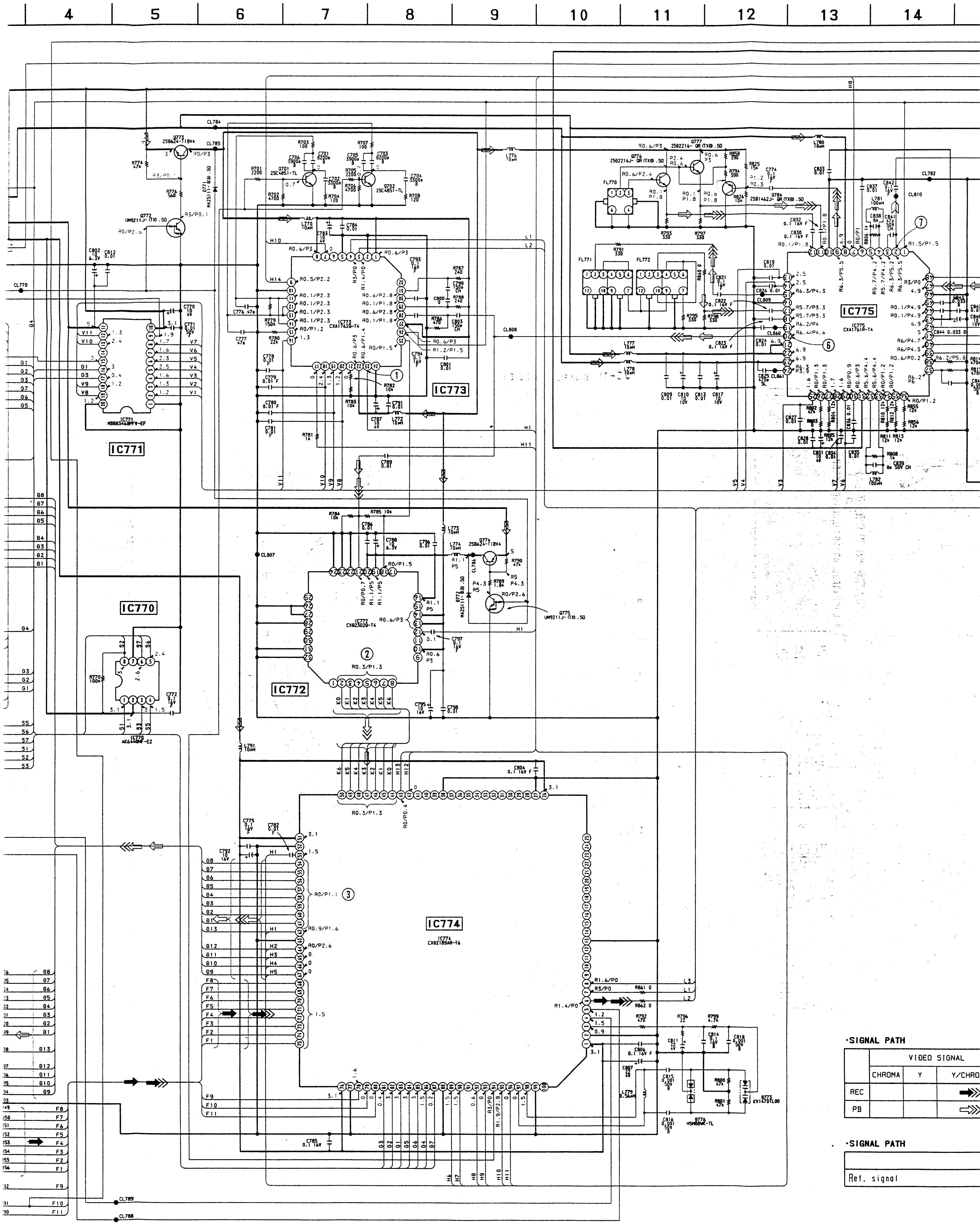
IC772
CX82302Q-T4
IC773
CXA1762Q-T4
IC774
CX82189AR-T6
IC775
CXA1761R-T4
Q701 2SC4851-TL
Q702 2SC4851-TL
Q774 2SB624-T1BV4
Q775 UN9211J-(TX).SO
Q776 2SD2216J-QR(TX).SO
Q777 2SD2216-QR(TX).SO
Q778 2SD2216J-QR(TX).SO
Q779 2SD2216J-QR(TX).SO
Q784 2SB1462J-QR(TX).SO
D772 MA2S111-(K8).SO
D773 KV1470TL00
D776 HSM88WK-TL
FL770
FL771
FL772
L776 10μH
L780 10μH
L781 100μH
L783 10μH
L791 10μH
L779 0.56mH
CL807
CL808
CL782
CL810
CL783
CL811
CL771
RO/P1.1
R0.3/P1.3

·SIGNAL PATH

	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	SIGNAL
REC			➡»	➡
PB			⇨»	⇨

·SIGNAL PATH

	REC	REC/PB	PB
Ref. signal			▷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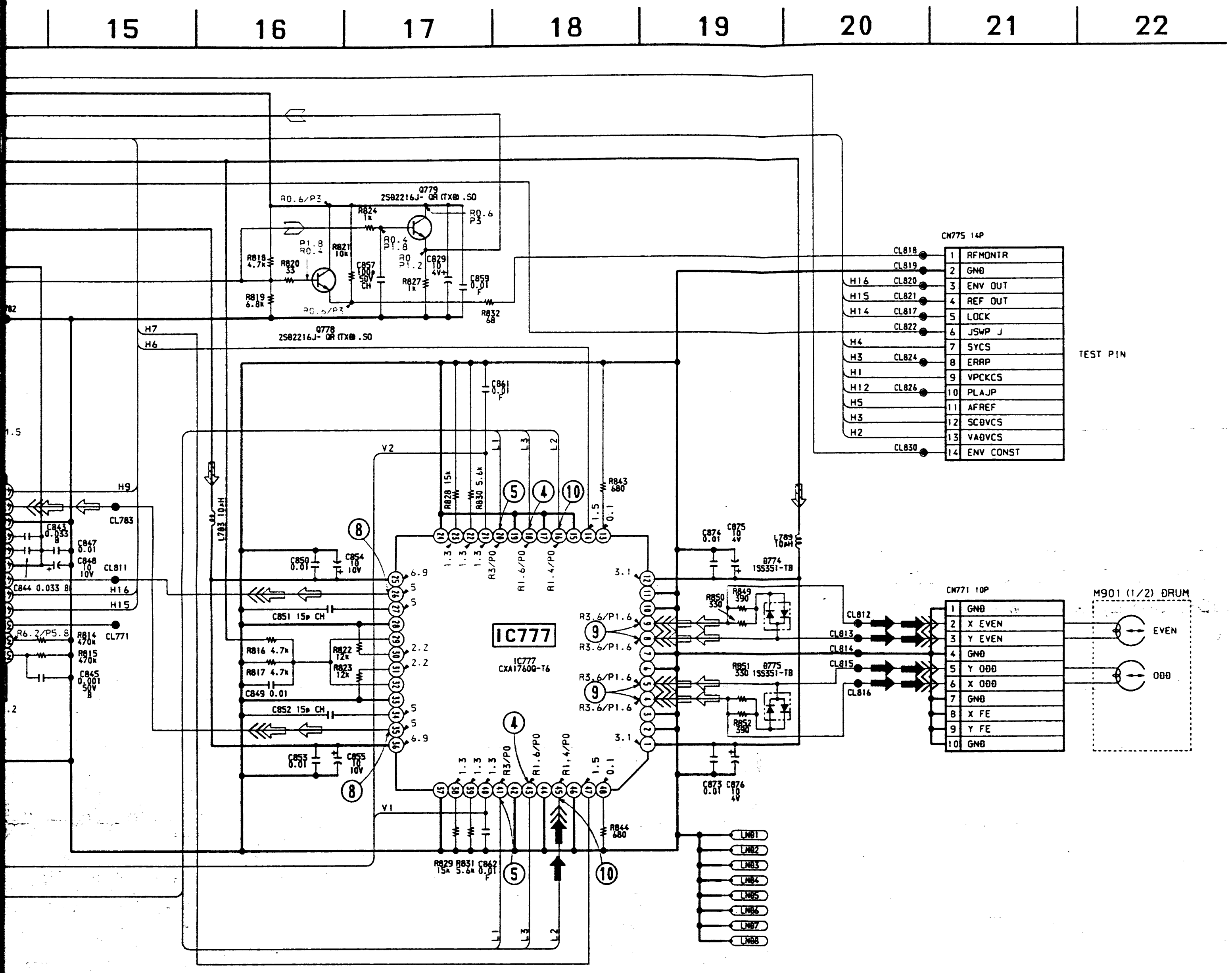
IC770
IC770 AK6440AF-E2
IC771
IC771 MB88346BPFV-EF
IC772
IC772 CXD2302Q-T4
IC773
IC773 CXA1762Q-T4
IC774
IC774 CXD2189AR-T6
IC775
IC775 CXA1761R-T4
Q701 2SC4851-TL
Q702 2SC4851-TL
Q772 UN9211J-(TX).SO
Q773 2SB624-T1BV4
Q774 2SB624-T1BV4
Q775 UN9211J-(TX).SO
Q776 2SD2216J-QR(TX).SO
Q777 2SD2216-QR(TX).SO
Q784 2SB1462J-QR(TX).SO
D771 MA2S111-(K8).SO
D772 MA2S111-(K8).SO
D773 KV1470TL00
D776 HSM88WK-TL
FL770
FL771
FL772
CL770
CL784
CL785
CL788
CL789
CL807
CL808
CL809
CL810
CL860
CL861
①
②
③
⑥
⑦

-SIGNAL PATH

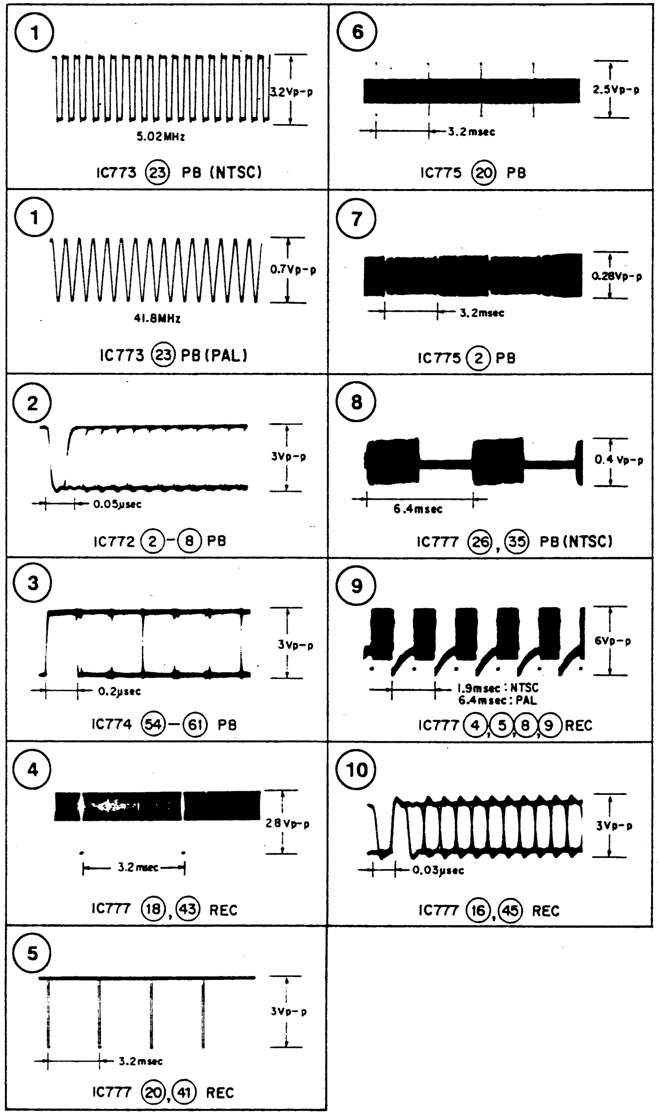
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHRO
REC			➡≫
PB			⇨≫

-SIGNAL PATH

Ref. signal


15
16
17
18
19
20
21
22
Q779 2SB2216J-QR(TX)B).SO
Q778 2SB2216J-QR(TX)B).SO
IC777
CXA1760Q-T6
CN775 14P
1 RFMONTR
2 GND
3 ENV OUT
4 REF OUT
5 LOCK
6 JSWP J
7 SYCS
8 ERRP
9 VPCKCS
10 PLAJP
11 AFREF
12 SCDVCS
13 VADVCS
14 ENV CONST
TEST PIN
CN771 10P
1 GND
2 X EVEN
3 Y EVEN
4 GND
5 Y ODD
6 X ODD
7 GND
8 X FE
9 Y FE
10 GND
M901 (1/2) DRUM
EVEN
ODD
D774 1SS351-TB
D775 1SS351-TB
L783 10μH
L789 10μH

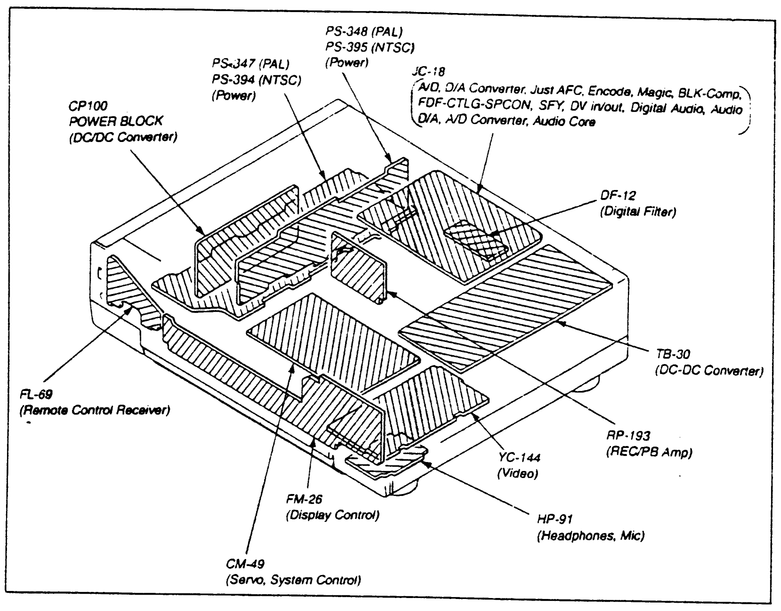
RP-193 BOARD



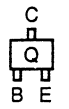
DSR-30: NTSC model
DSR-30P: PAL model

O SIGNAL		AUDIO
	Y/CHROMA	SIGNAL
	➡»	➡
	⇨»	⇨

	REC	REC/PB	PB
			▷


PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

- **For Printed Wiring Boards.**
- This board is six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- Chip transistor



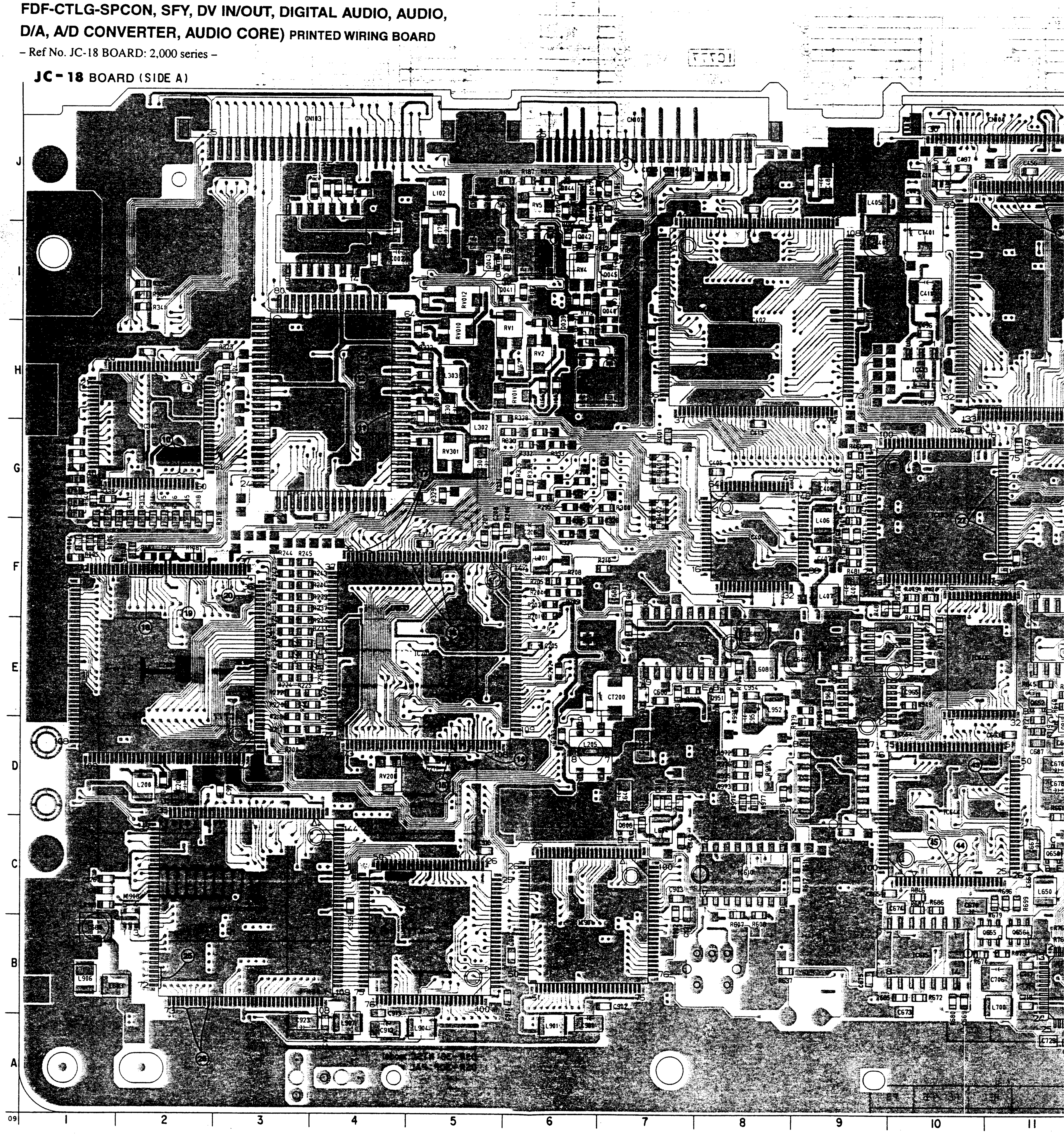
There are few cases that the part isn't mounted in this model is printed on this diagram.

JC-18 (A/D, D/A CONVERTER, JUST AFC, ENCODE, MAGIC, BLK-COMP, FDF-CTLG-SPCON, SFY, DV IN/OUT, DIGITAL AUDIO, AUDIO, D/A, A/D CONVERTER, AUDIO CORE) PRINTED WIRING BOARD

– Ref No. JC-18 BOARD: 2,000 series –

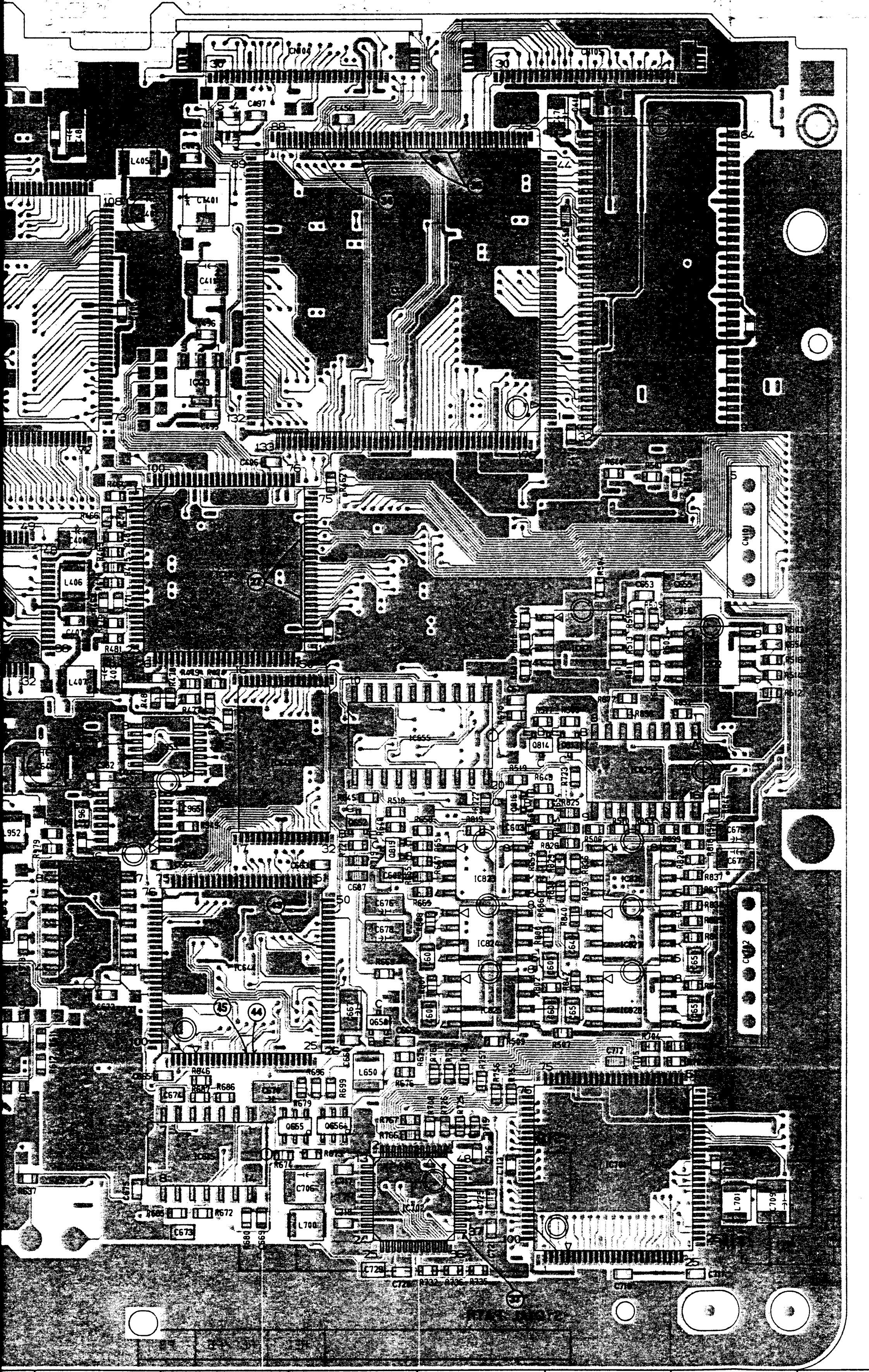
JC-18 BOARD

CN101	G-14
CN102	J-7
CN103	J-3
CN104	J-11
CN105	J-13
CN106	H-18
CN616	D-19
CN702	D-14
D200	D-24
D401	I-19
D402	J-20
D403	J-19
D404	J-20
D601	E-7
D606	C-23
D607	C-23
D608	B-23
D609	B-23
D802	E-20
IC009	I-26
IC010	I-25
IC011	I-24
IC012	H-26
IC013	H-24
IC014	H-25
IC015	G-28
IC016	G-27
IC017	G-26
IC018	J-25
IC101	I-4
IC200	E-2
IC201	E-5
IC202	E-26
IC203	D-25
IC204	G-23
IC205	E-24
IC301	G-2
IC302	H-4
IC401	F-8 (DSR-30P)
IC402	I-8
IC403	G-10
IC404	J-22
IC405	H-22
IC406	G-22
IC409	J-17
IC410	I-20
IC411	I-13
IC412	I-11
IC413	H-10
IC414	J-10
IC610	C-8
IC611	D-23
IC612	C-22
IC613	D-23
IC615	B-10
IC620	E-23
IC621	E-7
IC644	D-10
IC646	E-10
IC650	D-9
IC655	E-12
IC700	B-17
IC701	B-13
IC702	B-12
IC801	G-19
IC802	F-17
IC805	E-19
IC807	F-20
IC809	G-20
IC821	F-13
IC822	F-14
IC823	D-12
IC824	D-12
IC825	C-12
IC826	D-13
IC827	D-13
IC828	C-13
IC829	E-13
IC901	B-6
IC902	B-26
IC903	C-28
IC904	B-5
IC905	C-26
IC906	B-28
IC907	C-3
IC908	C-2
IC954	E-9
IC955	E-10
Q026	I-29
Q027	I-28
Q028	I-27
Q029	I-29
Q030	I-28
Q031	I-28
Q032	H-29
Q033	H-28
Q034	H-28
Q035	H-29
Q036	H-28
Q037	H-27
Q039	I-6
Q040	I-7
Q041	I-5
Q042	I-6
Q043	I-5
Q044	J-6
Q045	I-7
Q046	J-6
Q047	J-6
Q048	J-26
Q200	B-25
Q201	C-25
Q401	H-21
Q606	C-7
Q607	C-23
Q650	C-11
Q652	E-11
Q655	B-11
Q656	B-11
Q813	E-13
Q814	E-13
Q815	D-11
Q816	E-12
Q951	E-8

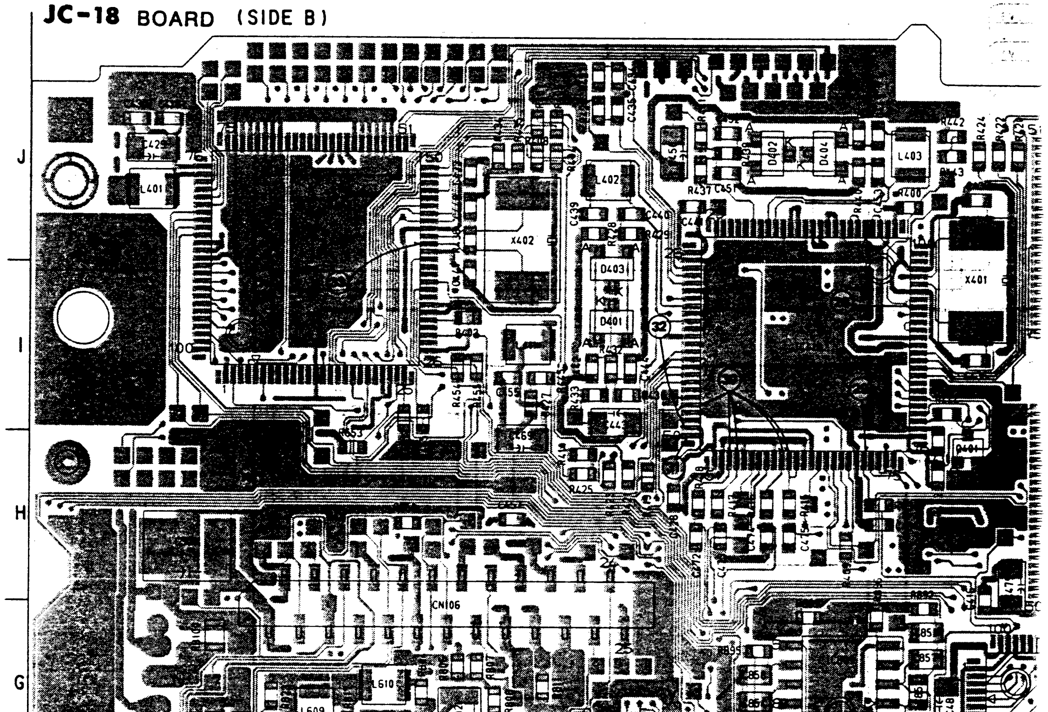

JC-18 BOARD (SIDE A)
J
I
H
G
F
E
D
C
B
A
09
1
2
3
4
5
6
7
8
9
10
11

However, the patterns of
in the diagram.

n't mounted in this model is


9
10
11
12
13
14
15

JC-18 BOARD (SIDE B)


J
I
H
G
F
E
D
C
B
A
16
17
18
19
20
21

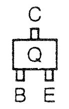
UDIO, D/A, A/D CONVERTER, AUDIO CORE

LK-Comp,
dio, Audio

C Converter)

o)

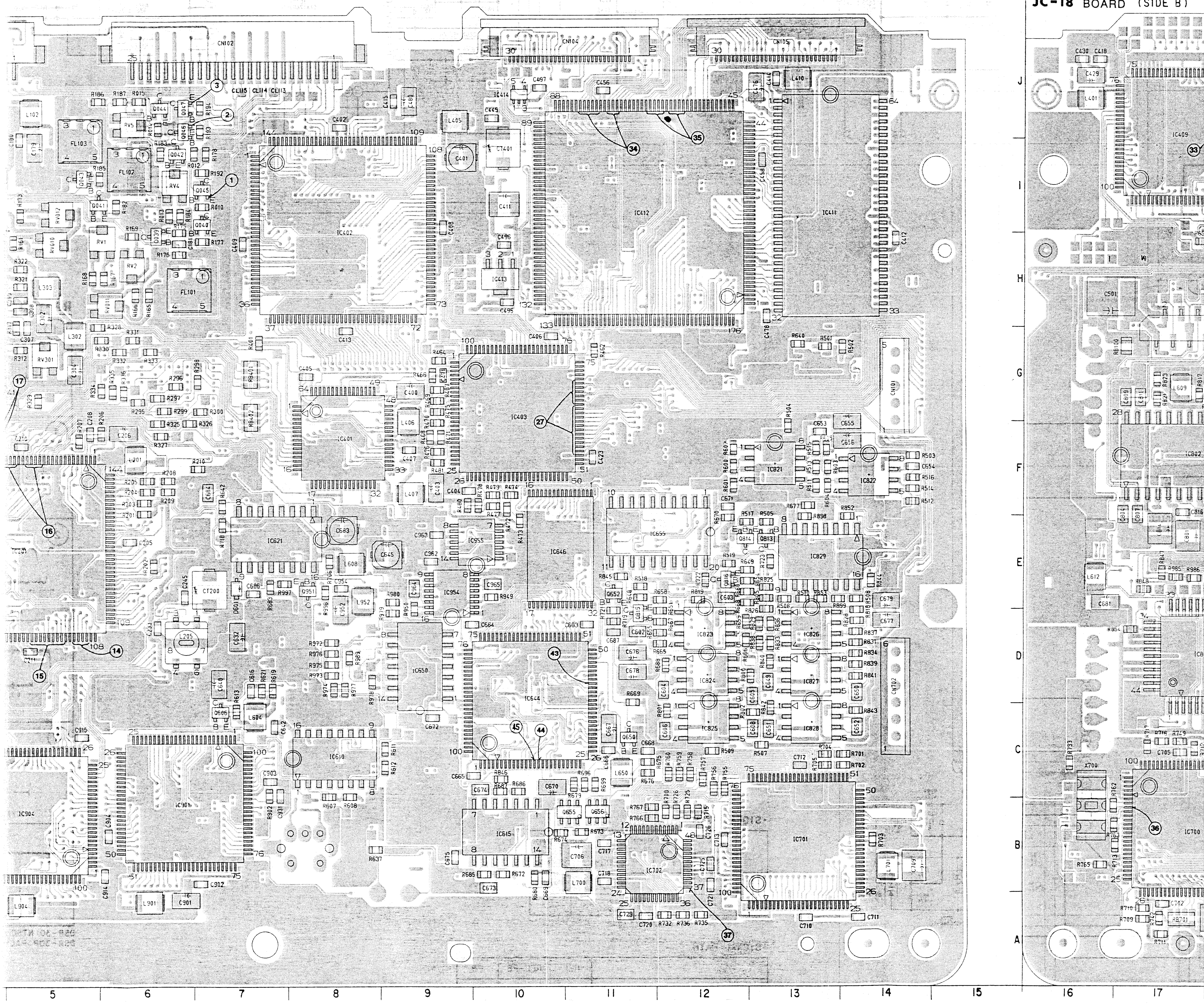
- **For Printed Wiring Boards.**
- This board is six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- Chip transistor



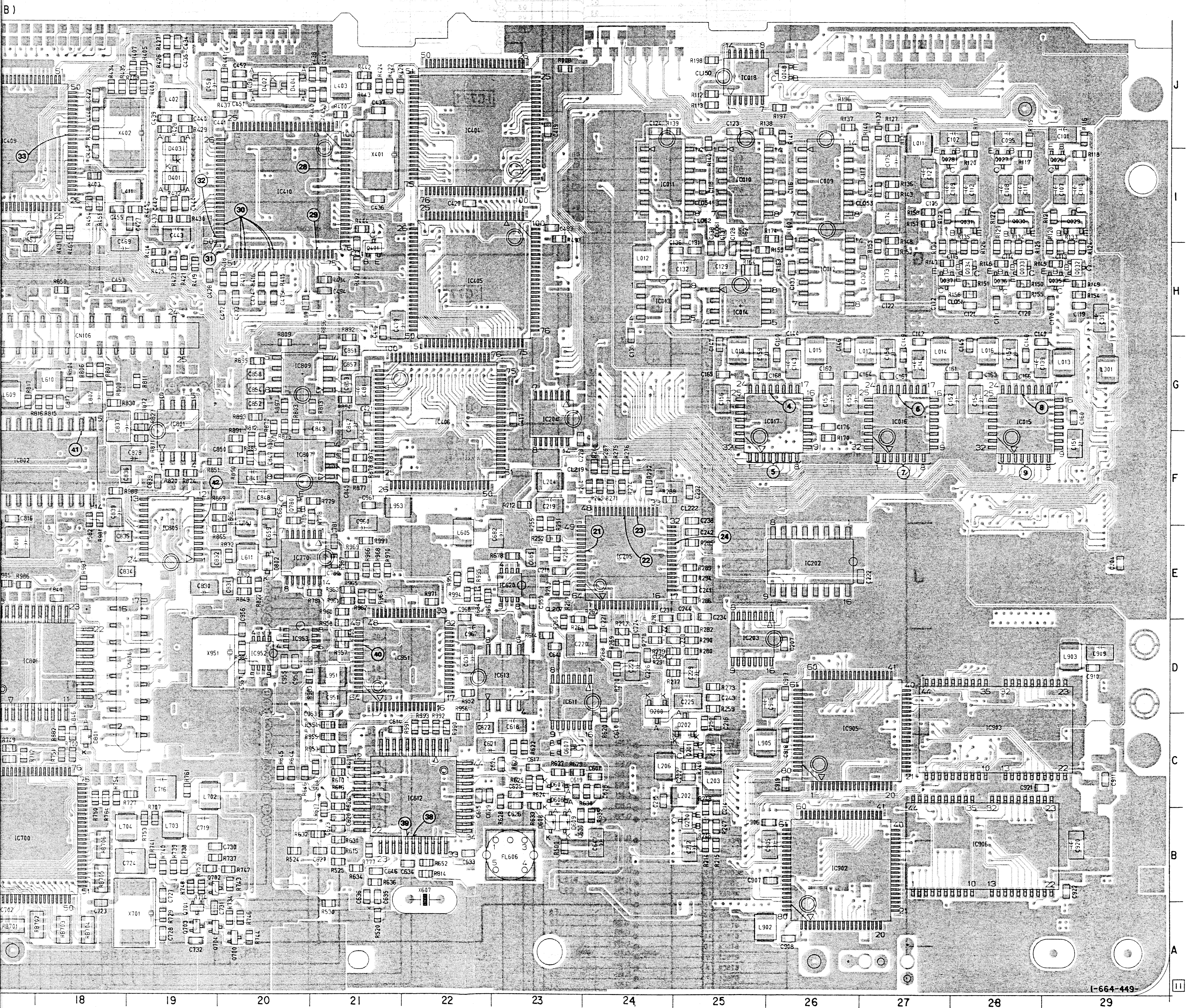
There are few cases that the part isn't mounted in this model is printed on this diagram.

GIC, BLK-COMP,
DIO,
RD

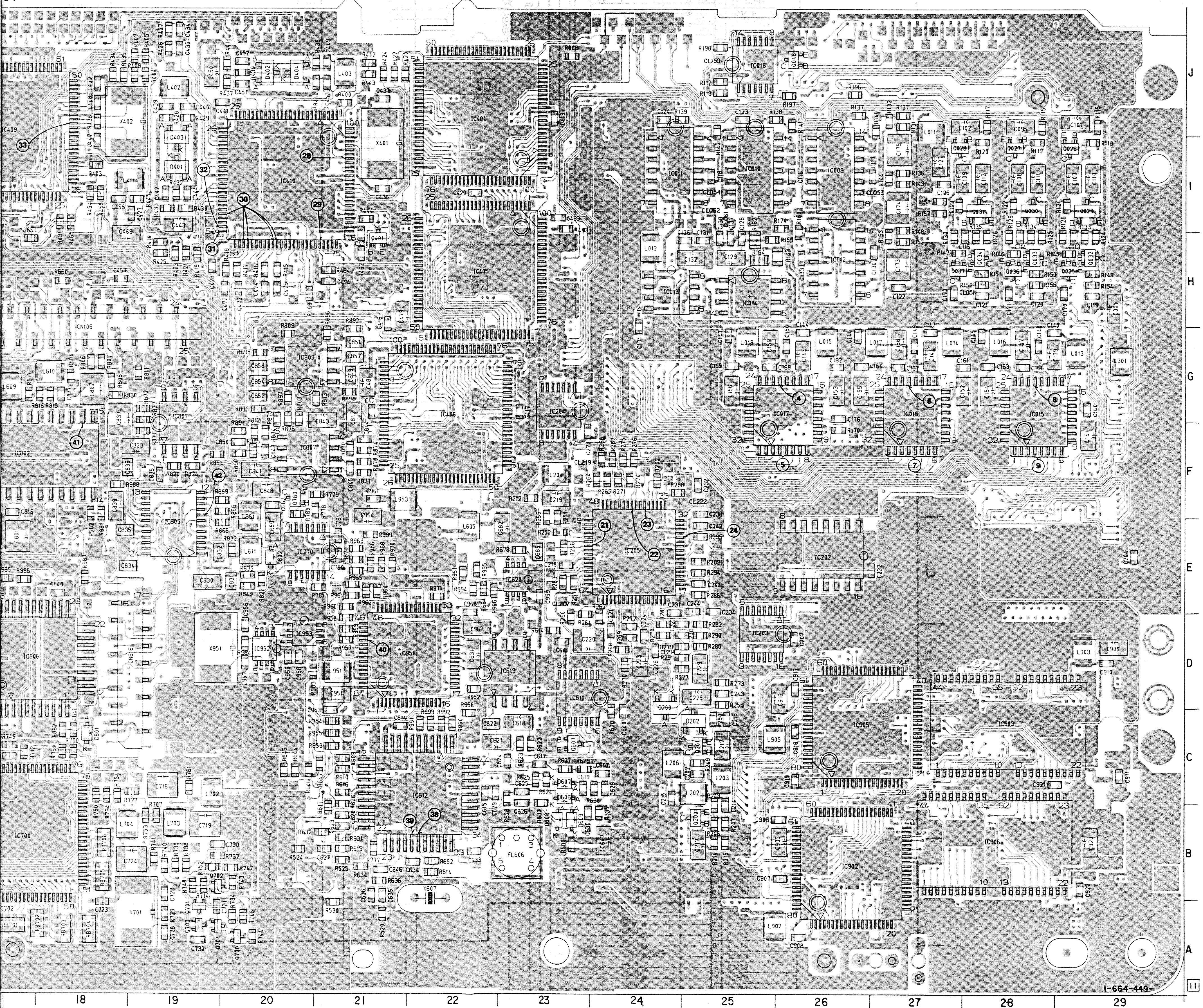
JC-18 BOARD (SIDE B)


CN102
CN104
CN105
CN101
CN702
IC402
IC412
IC411
IC413
IC403
IC401
IC621
IC955
IC646
IC655
IC829
IC821
IC822
IC954
IC650
IC644
IC823
IC826
IC824
IC827
IC825
IC828
IC610
IC901
IC904
IC615
IC732
IC701
IC409
IC700
FL101
FL102
FL103
CT200
L205
X700
J
I
H
G
F
E
D
C
B
A
5
6
7
8
9
10
11
12
13
14
15
16
17

SPCON, SFY, DV IN/OUT, DIGITAL AUDIO, AUDIO, D/A, A/D CONVERTER, AUDIO CORE
JC-18


B)
J
I
H
G
F
E
D
C
B
A
II
18
19
20
21
22
23
24
25
26
27
28
29
1-664-449-
IC409
IC410
IC404
IC405
IC406
IC018
IC011
IC010
IC009
IC012
IC013
IC014
IC017
IC016
IC015
IC202
IC203
IC204
IC205
IC905
IC903
IC902
IC906
IC700
IC612
IC613
IC611
IC620
IC805
IC770
IC806
IC801
IC809
IC807
IC952
IC953
X401
X402
X951
X701
X607
FL606
CN106

B)

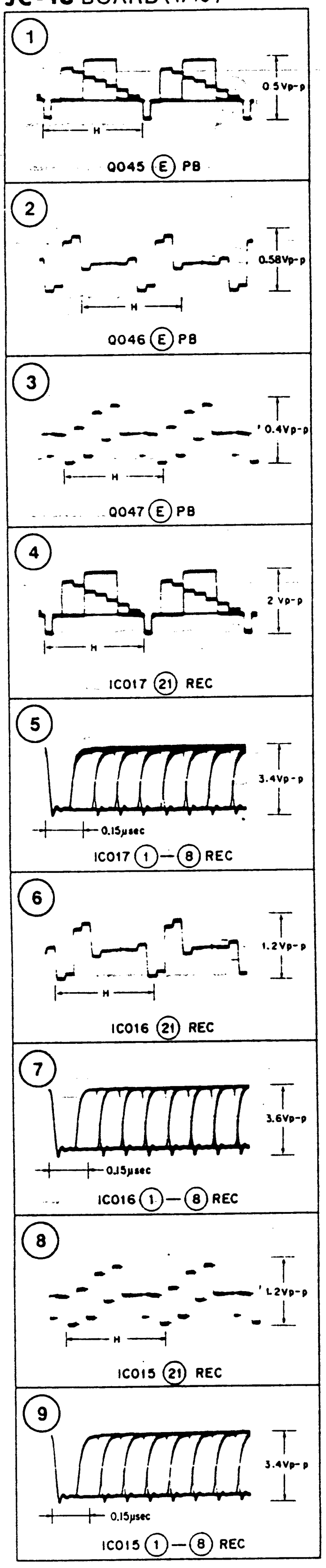


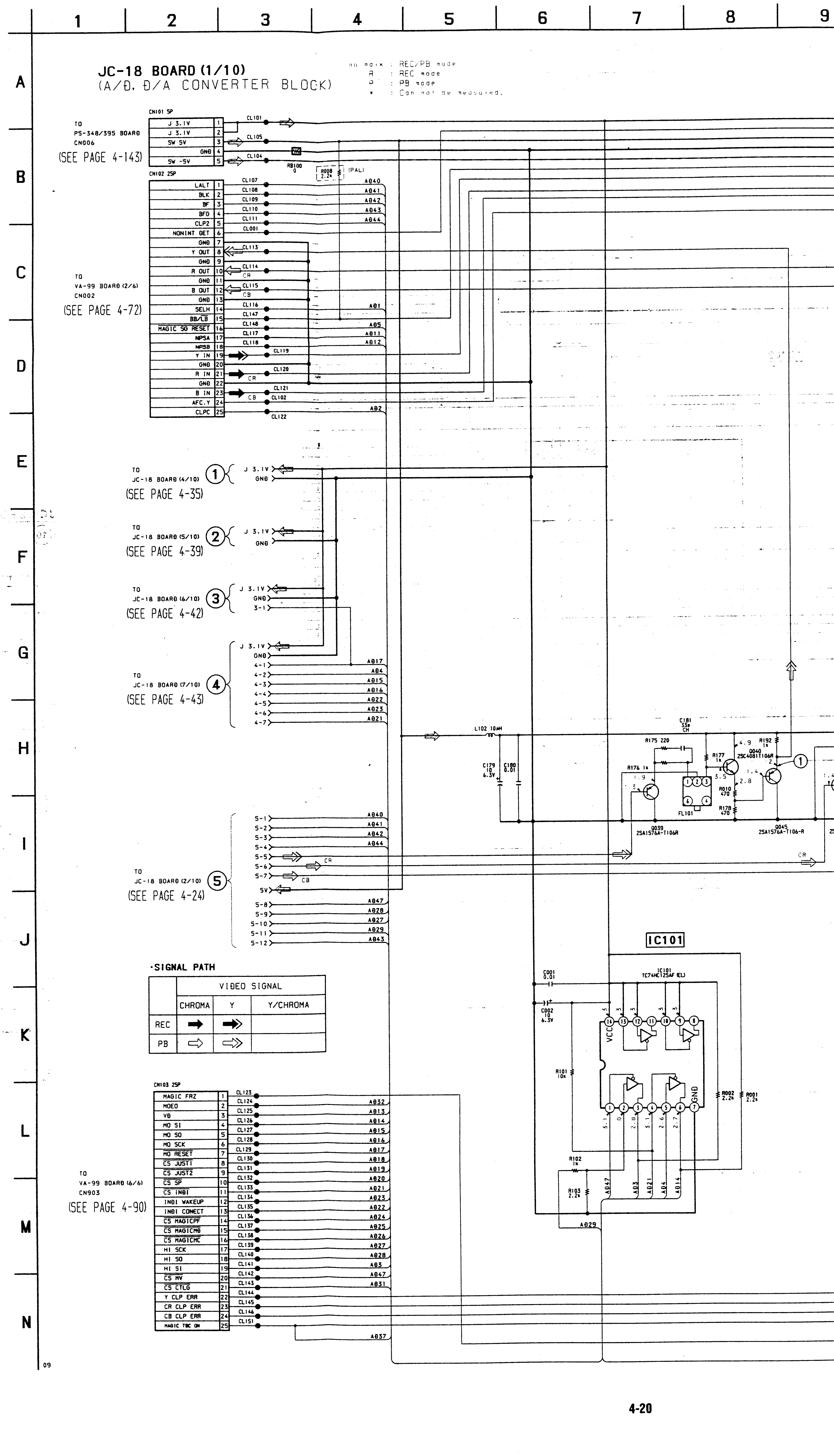
J
I
H
G
F
E
D
C
B
A
II
18
19
20
21
22
23
24
25
26
27
28
29
1-664-449-
IC409
IC410
IC404
IC405
IC406
IC018
IC011
IC010
IC009
IC012
IC013
IC014
IC017
IC016
IC015
IC809
IC807
IC801
IC802
IC805
IC770
IC204
IC205
IC202
IC203
IC806
IC953
IC952
IC951
IC613
IC611
IC612
IC700
IC905
IC903
IC902
IC906
CN106
X401
X402
X701
X951
X607
FL606

JC-18 (A/D, D/A CONVERTER) SCHEMATIC DIAGRAM

– Ref No. JC-18 BOARD: 2,000 series –

JC-18 BOARD (1/10)

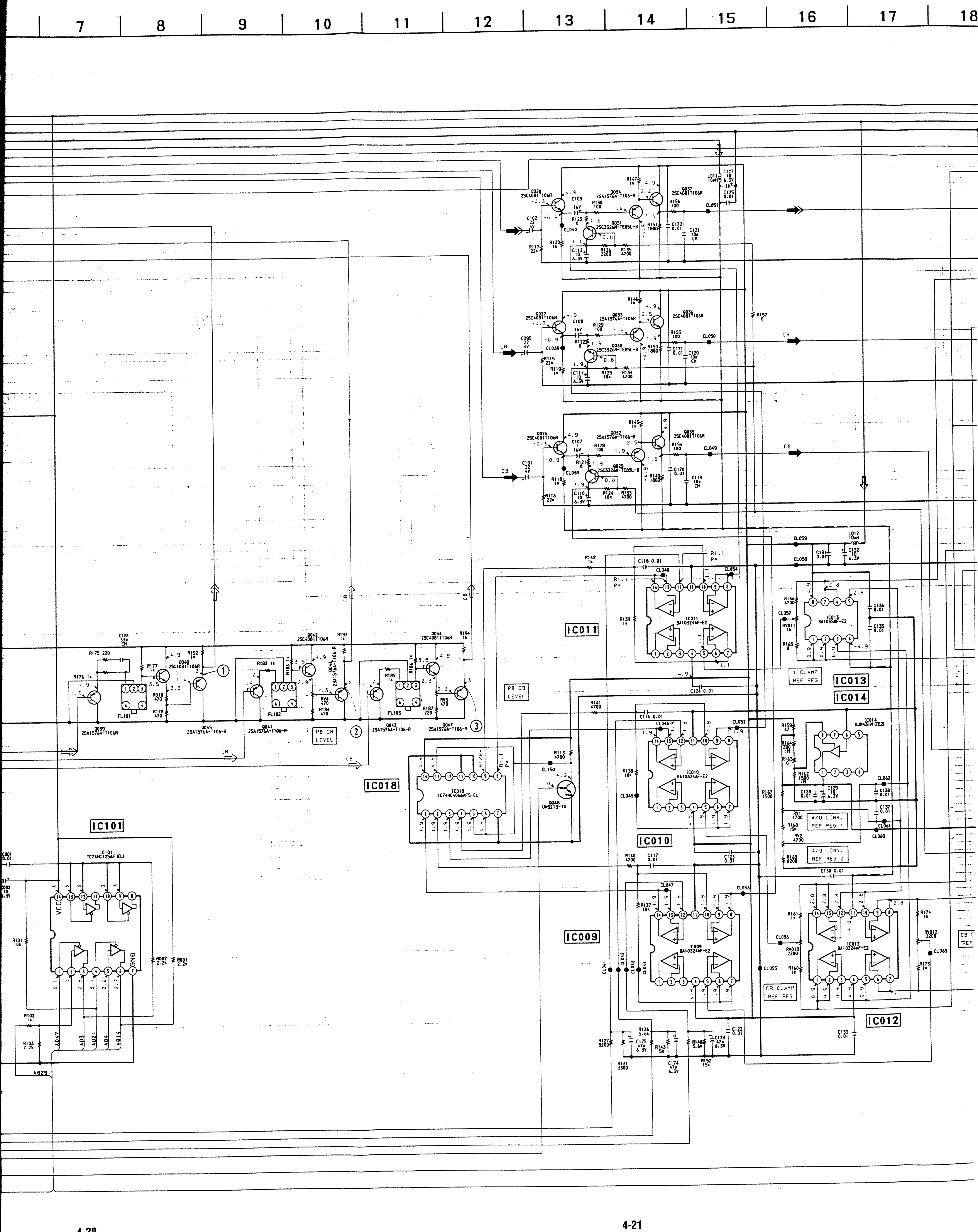


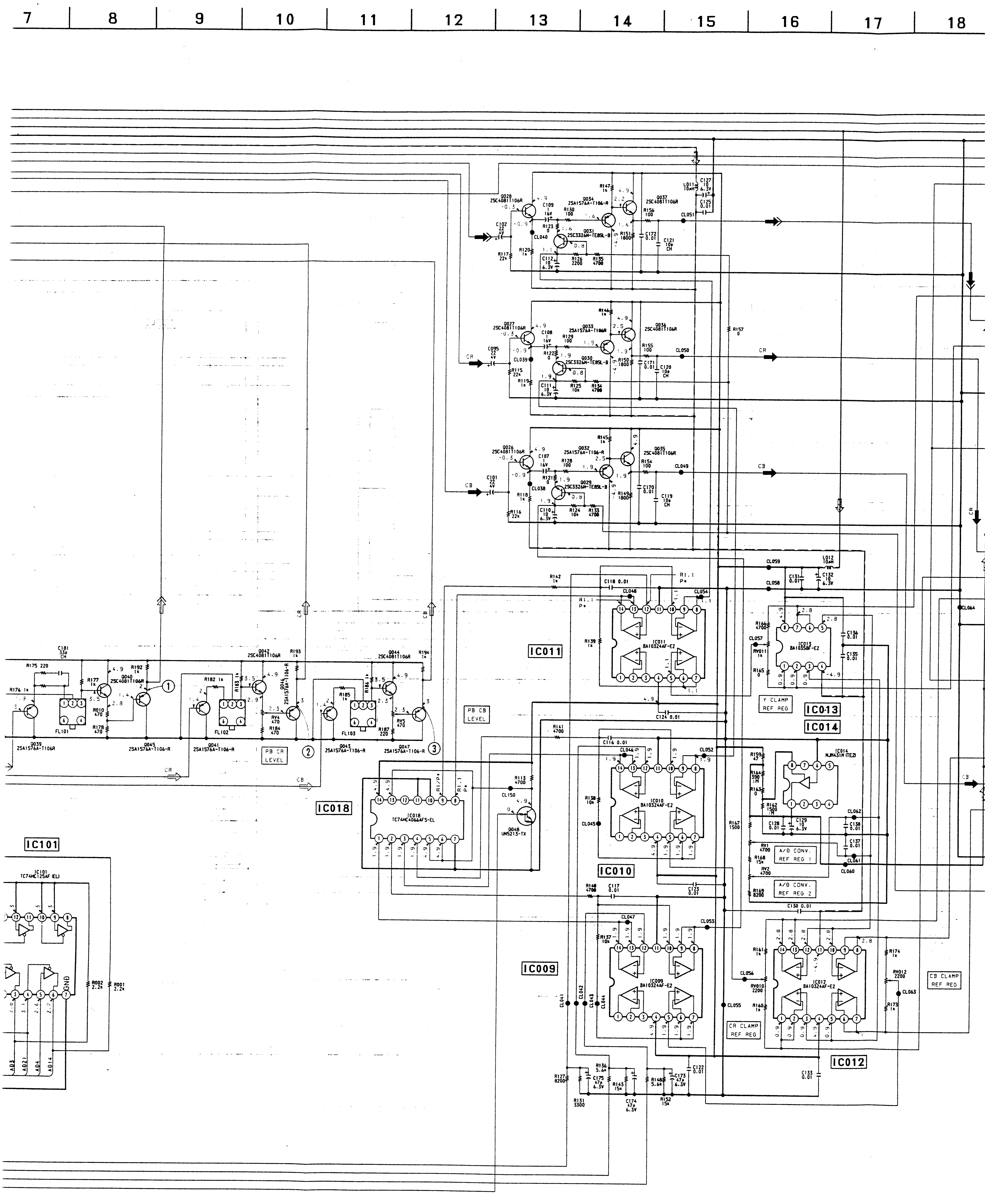


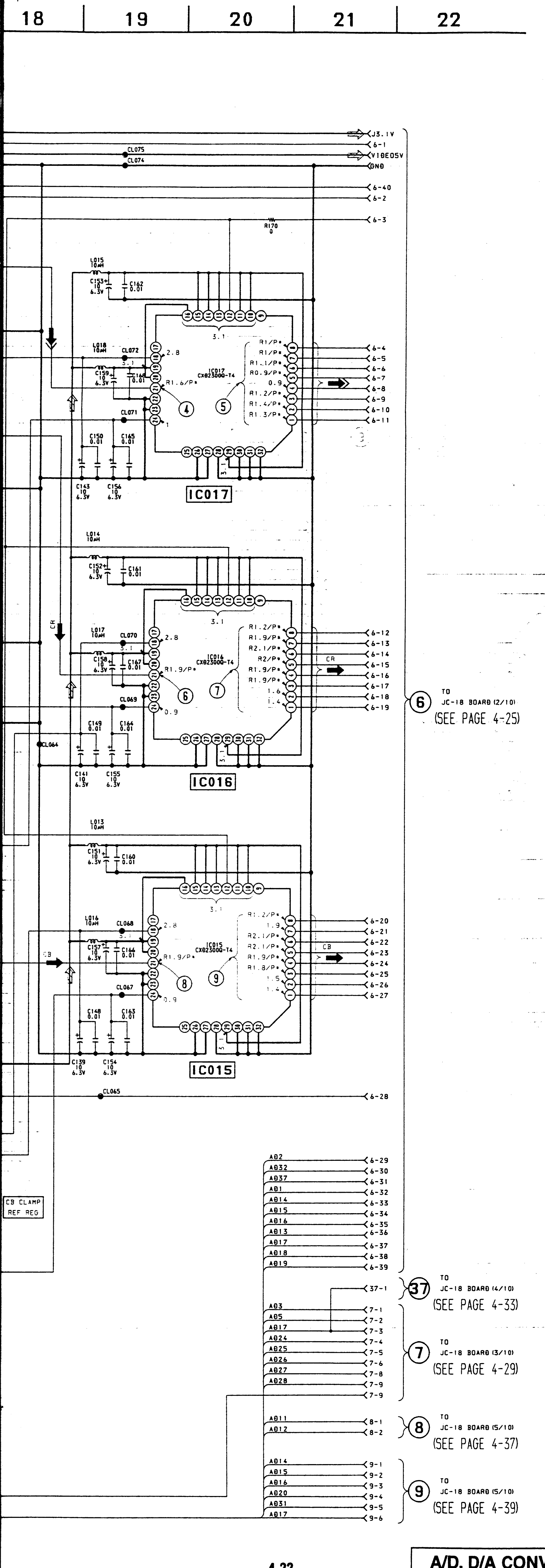
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
J
K
L
M
N
JC-18 BOARD (1/10)
(A/D, D/A CONVERTER BLOCK)
no mark : REC/PB mode
R : REC mode
P : PB mode
* : Can not be measured.
CN101 5P
TO PS-348/395 BOARD CN006
(SEE PAGE 4-143)
J 3.1V
J 3.1V
SW 5V
GND
SW -5V
CL101
CL105
CL104
RB100 0
R008 2.2k
(PAL)
CN102 25P
TO VA-99 BOARD (2/6) CN002
(SEE PAGE 4-72)
LALT
BLK
BF
BFG
CLP2
NONINT DET
GND
Y OUT
GND
R OUT
GND
B OUT
GND
SELH
BB/LB
MAGIC SO RESET
NPSA
NPSB
Y IN
GND
R IN
GND
B IN
AFC.Y
CLPC
TO JC-18 BOARD (4/10) ①
(SEE PAGE 4-35)
TO JC-18 BOARD (5/10) ②
(SEE PAGE 4-39)
TO JC-18 BOARD (6/10) ③
(SEE PAGE 4-42)
TO JC-18 BOARD (7/10) ④
(SEE PAGE 4-43)
TO JC-18 BOARD (2/10) ⑤
(SEE PAGE 4-24)
L102 10μH
C179 10 6.3V
C180 0.01
R175 220
C181 33p CH
R176 1k
R177 1k
R192 1k
Q040 2SC4081T106R
FL101
R010 470
R178 470
Q039 2SA1576A-T106R
Q045 2SA1576A-T106-R
IC101
IC101 TC74HC125AF (EL)
C001 0.01
C002 10 6.3V
R101 10k
R002 2.2k
R001 2.2k
R102 1k
R103 2.2k
VCC
GND
CN103 25P
TO VA-99 BOARD (6/6) CN903
(SEE PAGE 4-90)
MAGIC FRZ
MOEO
VD
MO SI
MO SO
MO SCK
MO RESET
CS JUST1
CS JUST2
CS SP
CS INO1
INO1 WAKEUP
INO1 CONECT
CS MAGICPF
CS MAGICMO
CS MAGICMC
HI SCK
HI SO
HI SI
CS MV
CS CTLG
Y CLP ERR
CR CLP ERR
CB CLP ERR
MAGIC TBC ON
09

·SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡➡	
PB	⇨	⇨⇨	


7
8
9
10
11
12
13
14
15
16
17
18
IC011
BA10324AF-E2
IC010
BA10324AF-E2
IC009
BA10324AF-E2
IC012
BA10324AF-E2
IC013
BA10358F-E2
IC014
NJM431M (TE2)
IC018
TC74HC4066AF5-EL
IC101
TC74HC125AF (EL)
VCC
GND
Q028 2SC4081T106R
Q034 2SA1576A-T106-R
Q037 2SC4081T106R
Q031 2SC3326N-TE85L-B
Q027 2SC4081T106R
Q033 2SA1576A-T106-R
Q036 2SC4081T106R
Q030 2SC3326N-TE85L-B
Q026 2SC4081T106R
Q032 2SA1576A-T106-R
Q035 2SC4081T106R
Q029 2SC3326N-TE85L-B
Q039 2SA1576A-T106R
Q040 2SC4081T106R
Q045 2SA1576A-T106-R
Q041 2SA1576A-T106-R
Q042 2SC4081T106R
Q046 2SA1576A-T106-R
Q043 2SA1576A-T106-R
Q044 2SC4081T106R
Q047 2SA1576A-T106-R
Q048 UN5213-TX
FL101
FL102
FL103
CR
CB
PB CR LEVEL
PB CB LEVEL
Y CLAMP REF REG
A/D CONV. REF REG 1
A/D CONV. REF REG 2
CR CLAMP REF REG
CB C REF
R1.L P*
R1.1 P*
A047
A03
A021
A04
A014
A029
①
②
③


7
8
9
10
11
12
13
14
15
16
17
18
Q028 2SC4081T106R
Q034 2SA1576A-T106-R
Q031 2SC3326N-TE85L-B
Q037 2SC4081T106R
L011 10μH
C127 10 6.3V
C125 0.01
CL051
CL040
C102 22 4V
R117 22k
Q027 2SC4081T106R
Q033 2SA1576A-T106R
Q030 2SC3326N-TE85L-B
Q036 2SC4081T106R
CL050
CL039
C095 22 4V
R157 0
CR
Q026 2SC4081T106R
Q032 2SA1576A-T106-R
Q029 2SC3326N-TE85L-B
Q035 2SC4081T106R
CL049
CL038
C101 22 4V
CB
CL059
CL058
L012 10μH
C131 0.01
C132 10 6.3V
R142 1k
C118 0.01
CL048
CL054
IC011 BA10324AF-E2
IC011
IC013 BA10358F-E2
IC013
IC014
Y CLAMP REF REG
C124 0.01
CL064
C181 33p CH
R175 220
R176 1k
R177 1k
R192 1k
Q040 2SC4081T106R
Q045 2SA1576A-T106-R
Q039 2SA1576A-T106R
FL101
R010 470
R178 470
①
R182 1k
Q042 2SC4081T106R
R193 1k
Q046 2SA1576A-T106-R
Q041 2SA1576A-T106-R
FL102
RV4 470
R184 470
PB CR LEVEL
②
Q044 2SC4081T106R
R194 1k
R185 1k
Q043 2SA1576A-T106-R
FL103
RV5 470
R187 220
Q047 2SA1576A-T106-R
③
PB CB LEVEL
R141 4700
C116 0.01
CL046
CL052
IC014 NJM431M (TE2)
IC018 TC74HC4066AFS-EL
IC018
R113 4700
CL150
Q048 UN5213-TX
IC010 BA10324AF-E2
IC010
CL045
R138 10k
R167 1500
RV1 4700
A/D CONV. REF REG 1
RV2 4700
A/D CONV. REF REG 2
CL062
CL061
CL060
C129 10 6.3V
C128 0.01
C138 0.01
C137 0.01
IC101
IC101 TC74HC125AF (EL)
GND
R002 2.2k
R001 2.2k
AD3
AD21
AD4
AD14
R140 4700
C117 0.01
C123 0.01
C130 0.01
CL047
CL053
R137 10k
IC009 BA10324AF-E2
IC009
CL041
CL042
CL043
CL044
CL055
CL056
RV010 2200
R160 1k
R161 1k
CR CLAMP REF REG
IC012 BA10324AF-E2
IC012
R174 1k
RV012 2200
CL063
R173 1k
CB CLAMP REF REG
R136 5.6k
C175 47μ 6.3V
R127 8200
R143 15k
R131 3300
C174 47μ 6.3V
R148 5.6k
C173 47μ 6.3V
C122 0.01
R152 15k
C133 0.01
R169 8200
R168 15k

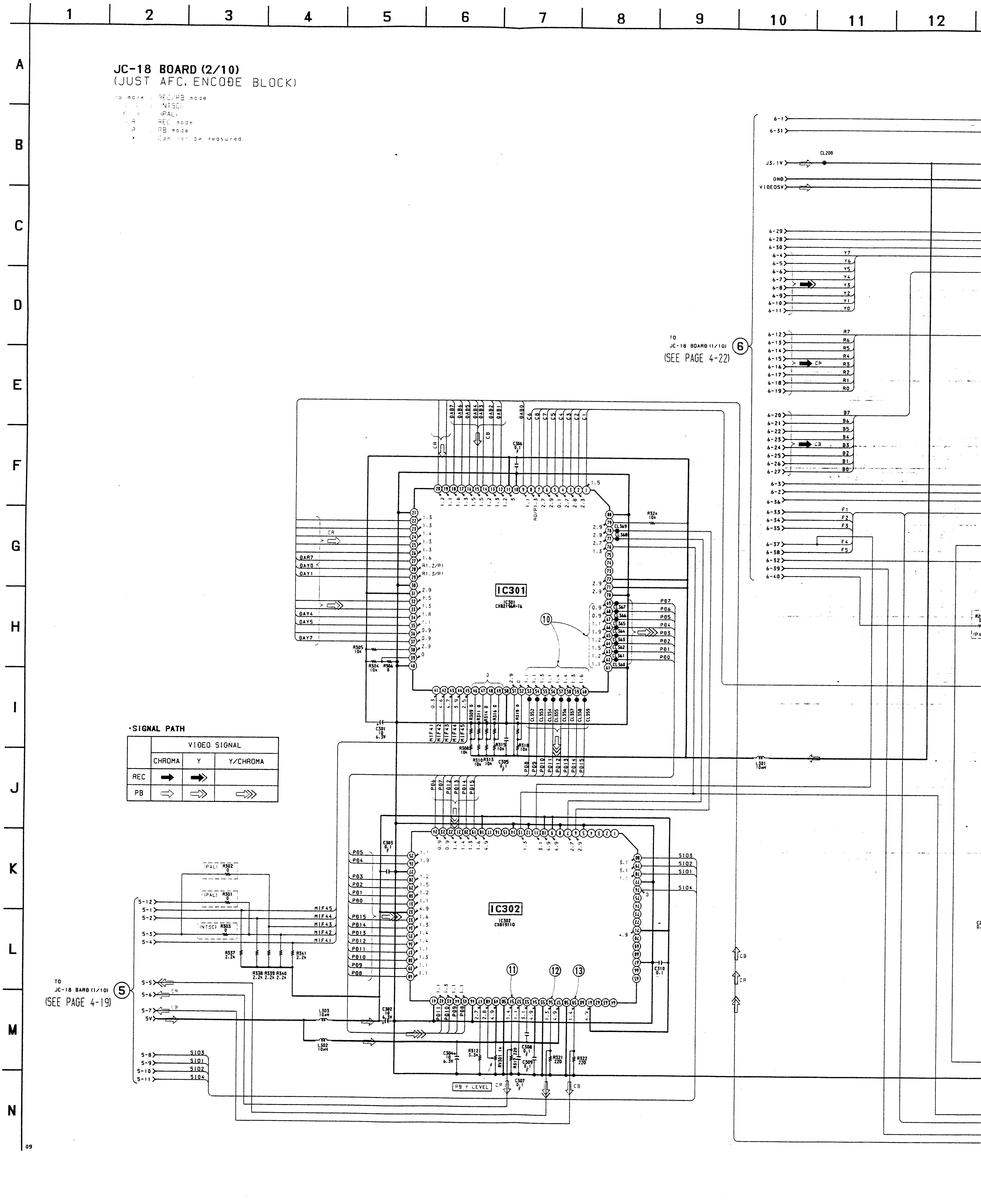

18
19
20
21
22
J3.1V
6-1
V10E05V
GND
6-40
6-2
6-3
R170
0
CL075
CL074
L015
10μH
C153
10
6.3V
C162
0.01
L018
10μH
CL072
C159
10
6.3V
C168
0.01
IC017
CXD2300Q-T4
R1.6/P*
CL071
C150
0.01
C165
0.01
C143
10
6.3V
C156
10
6.3V
IC017
6-4
6-5
6-6
6-7
6-8
6-9
6-10
6-11
L014
10μH
C152
10
6.3V
C161
0.01
L017
10μH
CL070
C158
10
6.3V
C167
0.01
IC016
CXD2300Q-T4
R1.9/P*
CL069
C149
0.01
C164
0.01
CL064
C141
10
6.3V
C155
10
6.3V
IC016
CR
6-12
6-13
6-14
6-15
6-16
6-17
6-18
6-19
L013
10μH
C151
10
6.3V
C160
0.01
L016
10μH
CL068
C157
10
6.3V
C166
0.01
IC015
CXD2300Q-T4
R1.9/P*
CL067
C148
0.01
C163
0.01
C139
10
6.3V
C154
10
6.3V
IC015
CB
6-20
6-21
6-22
6-23
6-24
6-25
6-26
6-27
CL065
6-28
CB CLAMP
REF REG
AD2
AD32
AD37
AD1
AD14
AD15
AD16
AD13
AD17
AD18
AD19
6-29
6-30
6-31
6-32
6-33
6-34
6-35
6-36
6-37
6-38
6-39
6
TO
JC-18 BOARD (2/10)
(SEE PAGE 4-25)
37-1
37
TO
JC-18 BOARD (4/10)
(SEE PAGE 4-33)
AD3
AD5
AD17
AD24
AD25
AD26
AD27
AD28
7-1
7-2
7-3
7-4
7-5
7-6
7-8
7-9
7-9
7
TO
JC-18 BOARD (3/10)
(SEE PAGE 4-29)
AD11
AD12
8-1
8-2
8
TO
JC-18 BOARD (5/10)
(SEE PAGE 4-37)
AD14
AD15
AD16
AD20
AD31
AD17
9-1
9-2
9-3
9-4
9-5
9-6
9
TO
JC-18 BOARD (5/10)
(SEE PAGE 4-39)

A/D, D/A CONVERTER
JC-18 (1/10)

JC-18 (JUST AFC, ENCODE) SCHEMATIC DIAGRAM

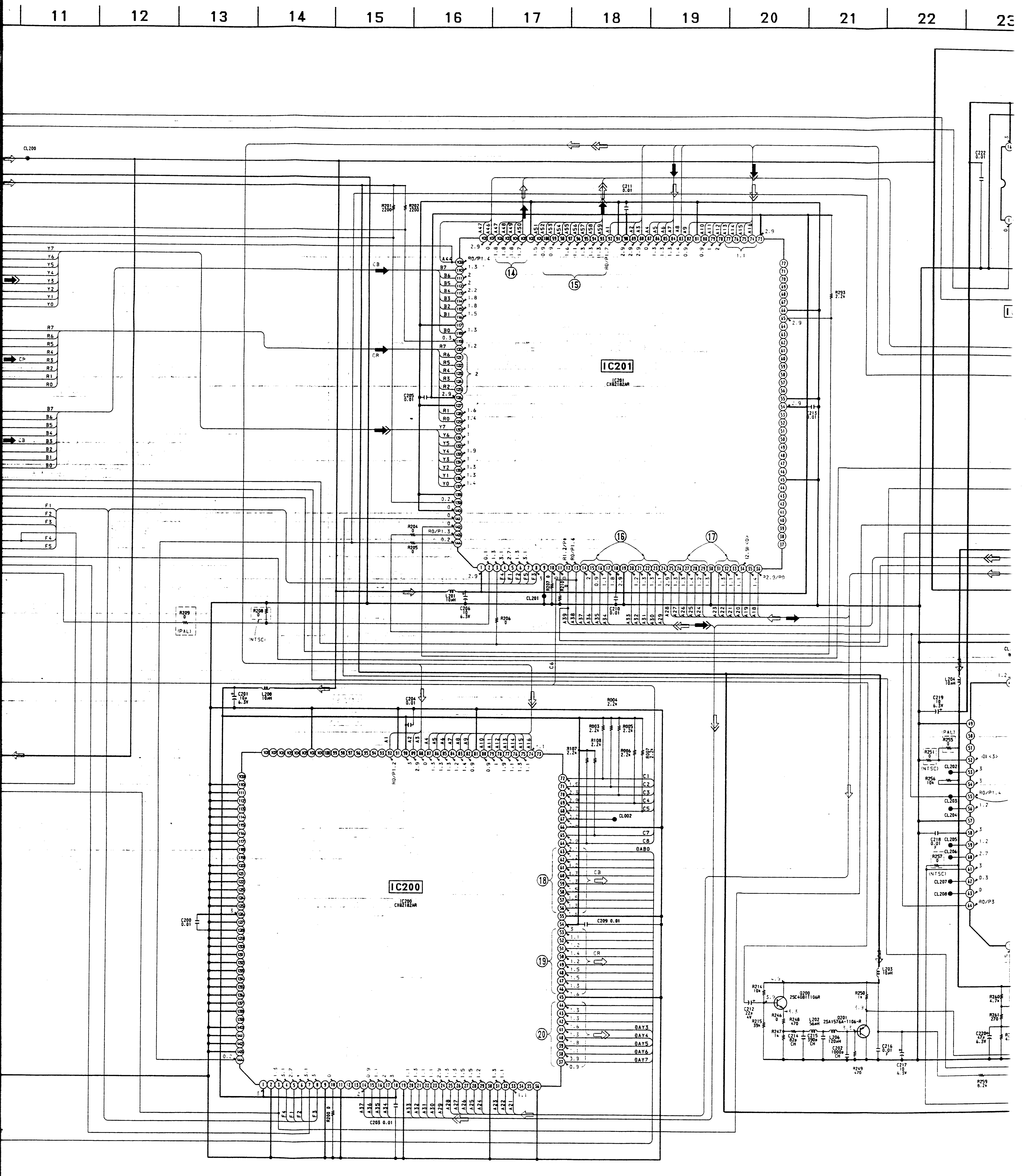
– Ref No. JC-18 BOARD: 2,000 series –

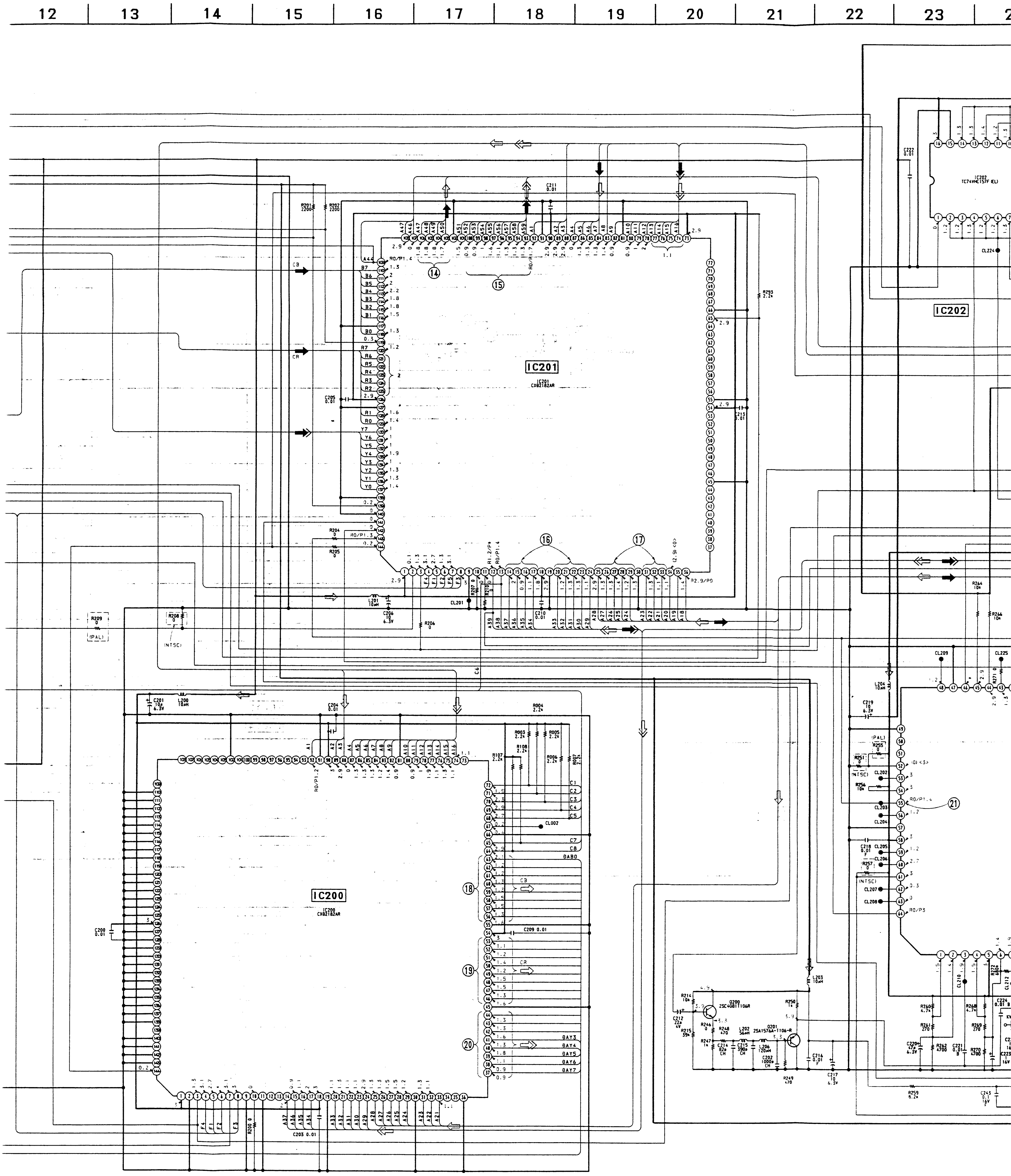
- Refer to page 4–15 for Printed Wiring Board.

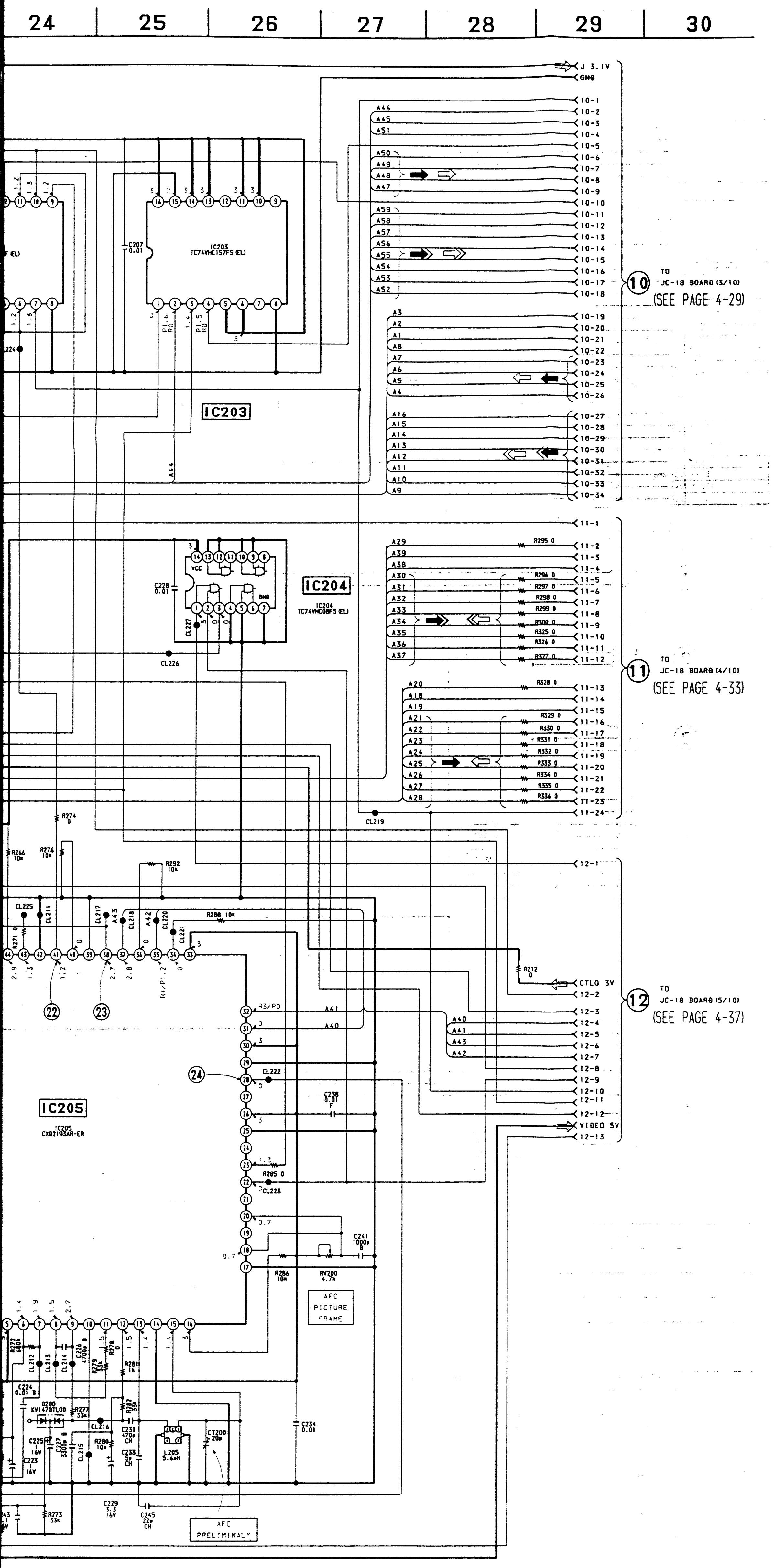

JC-18 BOARD (2/10)
(JUST AFC, ENCODE BLOCK)
no mark : REC/PB mode
( ) : (NTSC)
< > : (PAL)
R : REC mode
P : PB mode
* : Can not be measured.
IC301
CX8219AR-T6
IC302
CX81911Q
TO JC-18 BOARD (1/10) ⑥ (SEE PAGE 4-22)
TO JC-18 BOARD (1/10) ⑤ (SEE PAGE 4-19)
PB Y LEVEL
RV301
L301 10μH
L302 10μH
L303 10μH
J3.1V
GND
VIDEO5V
5V
CL200
1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
K
L
M
N
⑩
⑪
⑫
⑬

·SIGNAL PATH

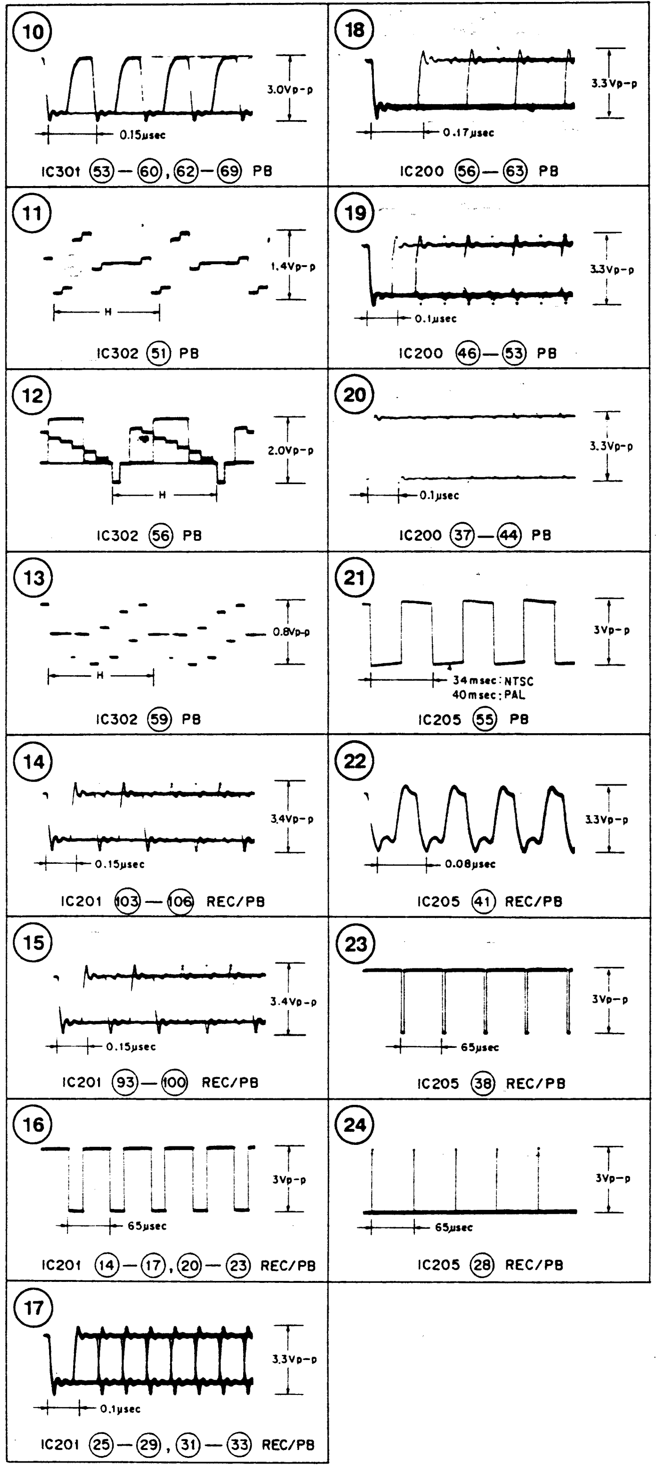
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡➡	
PB	⇨	⇨⇨	⇨⇨⇨


11
12
13
14
15
16
17
18
19
20
21
22
IC201
IC201 CX62182AR
IC200
IC200 CX62182AR
CL200
CL201
CL002
CB
CR
R201 2200
R202 2200
C211 0.01
C205 0.01
C206 10 6.3V
L201 10μH
R204 0
R205 0
R206 0
R207 0
R208 0
R209 0
(PAL)
(NTSC)
C210 0.01
R293 2.2k
C213 0.01
C201 10μ 6.3V
L200 10μH
C204 0.01
R004 2.2k
R003 2.2k
R005 2.2k
R006 2.2k
R007 2.2k
R107 2.2k
R108 2.2k
C200 0.01
C203 0.01
C209 0.01
R200 0
DAB0
DAY3
DAY4
DAY5
DAY6
DAY7
C222 0.01
L204 10μH
C219 10 6.3V
R255 0
R251 0
R256 10k
R257 0
C218 0.01
CL202
CL203
CL204
CL205
CL206
CL207
CL208
R0/P1.4
R0/P3
Q200 2SC4081T106R
Q201 2SA1576A-T106-R
R214 10k
C212 22μ 4V
R246 0
R215 39k
R247 1k
R248 470
C214 82p CH
C215 390p CH
L202 56μH
L206 120μH
C202 1000p CH
R249 470
R250 1k
L203 10μH
C216 0.01
C217 10 6.3V
R260 4.7k
R261 270
C220 47μ 6.3V
R259 8.2k
(14)
(15)
(16)
(17)
(18)
(19)
(20)


12
13
14
15
16
17
18
19
20
21
22
23
IC201
IC201
CX82182AR
IC200
IC200
CX82182AR
IC202
IC202
TC74VHC157F (EL)
C222
0.01
CL224
C211
0.01
R201
2200
R202
2200
CB
CR
B7
B6
B5
B4
B3
B2
B1
B0
R7
R6
R5
R4
R3
R2
R1
R0
Y7
Y6
Y5
Y4
Y3
Y2
Y1
Y0
C205
0.01
R293
2.2k
C213
0.01
R204
0
R205
0
R0/P1.4
R0/P1.3
R1.2/P
R2.9/P0
(2.9)<0>
⑭
⑮
⑯
⑰
L201
10mH
C206
10
6.3V
CL201
R206
0
R207
0
R210
0
C210
0.01
R209
0
(PAL)
R208
0
(NTSC)
C6
C201
10
6.3V
L200
10mH
C204
0.01
R004
2.2k
R003
2.2k
R005
2.2k
R108
2.2k
R107
2.2k
R006
2.2k
R007
2.2k
R0/P1.2
C1
C2
C3
C4
C5
CL002
C7
C8
DAB0
⑱
CB
C209 0.01
⑲
CR
⑳
DAY3
DAY4
DAY5
DAY6
DAY7
C200
0.01
F4
F1
F2
F3
R200 0
C203 0.01
A37
A36
A35
A34
A33
A32
A31
A30
A29
A28
A27
A26
A25
A24
A23
A22
A21
R214
10k
Q200
2SC4081T106R
C212
22μ
4V
R215
39k
R246
0
R247
1k
R248
470
C214
82p
CH
L202
56μH
C215
390p
CH
L206
120μH
C202
1000p
CH
Q201
2SA1576A-T106-R
R250
1k
L203
10μH
R249
470
C216
0.01
F
C217
10
6.3V
R264
10k
R266
10k
CL209
CL225
L204
10mH
C219
10
6.3V
(PAL)
R255
0
R251
0
(NTSC)
CL202
R254
10k
CL203
CL204
R0/P1.4
㉑
C218
0.01
F
CL205
CL206
R257
0
(NTSC)
CL207
CL208
R0/P3
R260
4.7k
R261
270
C220
47μ
6.3V
R262
4700
C221
0.01
R268
4.7k
R269
270
R270
4700
R259
9.2k
C243
0.1
16V


24
25
26
27
28
29
30
J 3.1V
GND
IC203
TC74VHC157FS (EL)
IC204
TC74VHC08FS (EL)
IC205
CX8219SAR-ER
TO JC-18 BOARD (3/10) (SEE PAGE 4-29)
TO JC-18 BOARD (4/10) (SEE PAGE 4-33)
TO JC-18 BOARD (5/10) (SEE PAGE 4-37)
CTLG 3V
VIDEO 5V
AFC PICTURE FRAME
AFC PRELIMINALY

JC-18 BOARD (2/10)

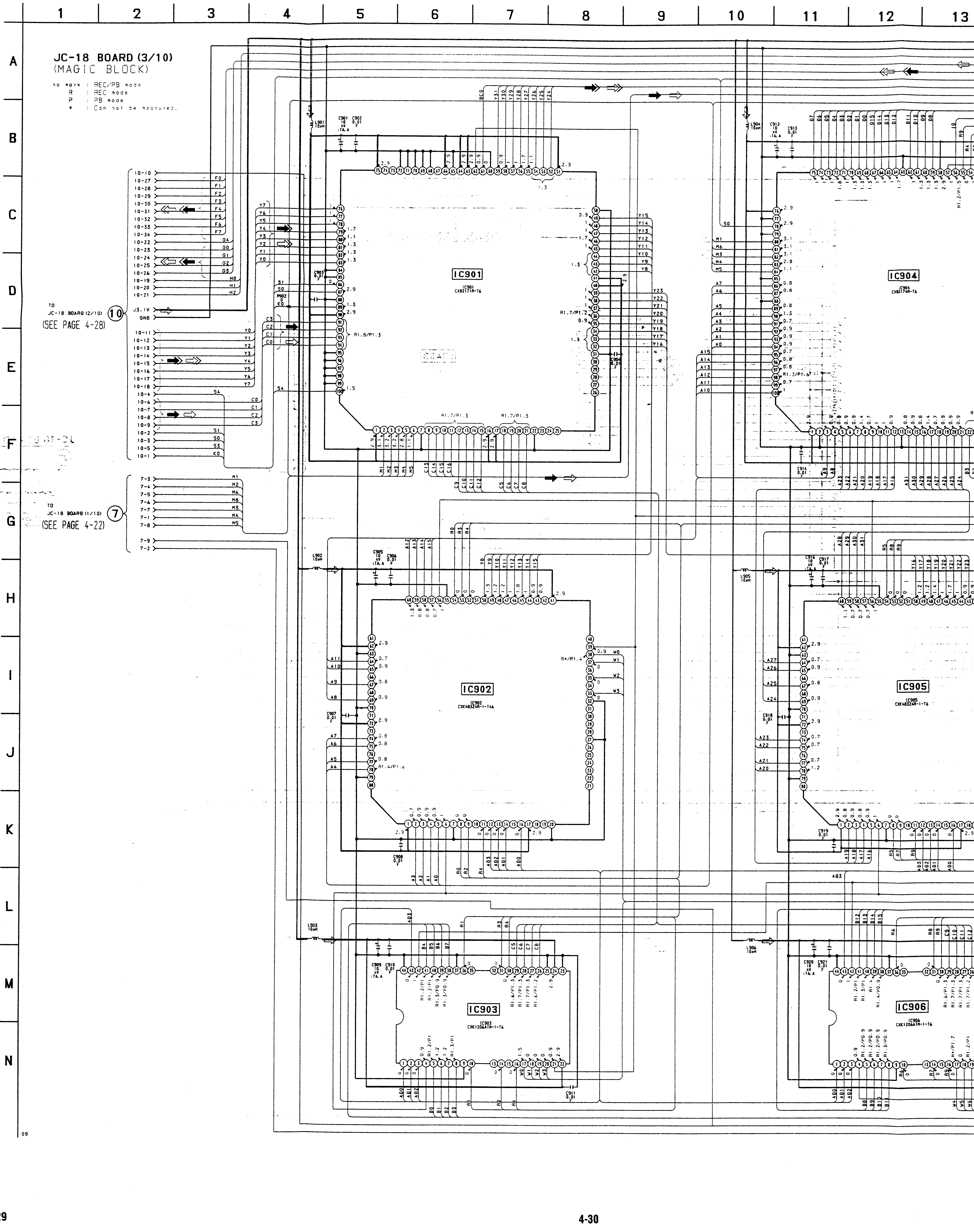


DSR-30: NTSC model
DSR-30P: PAL model

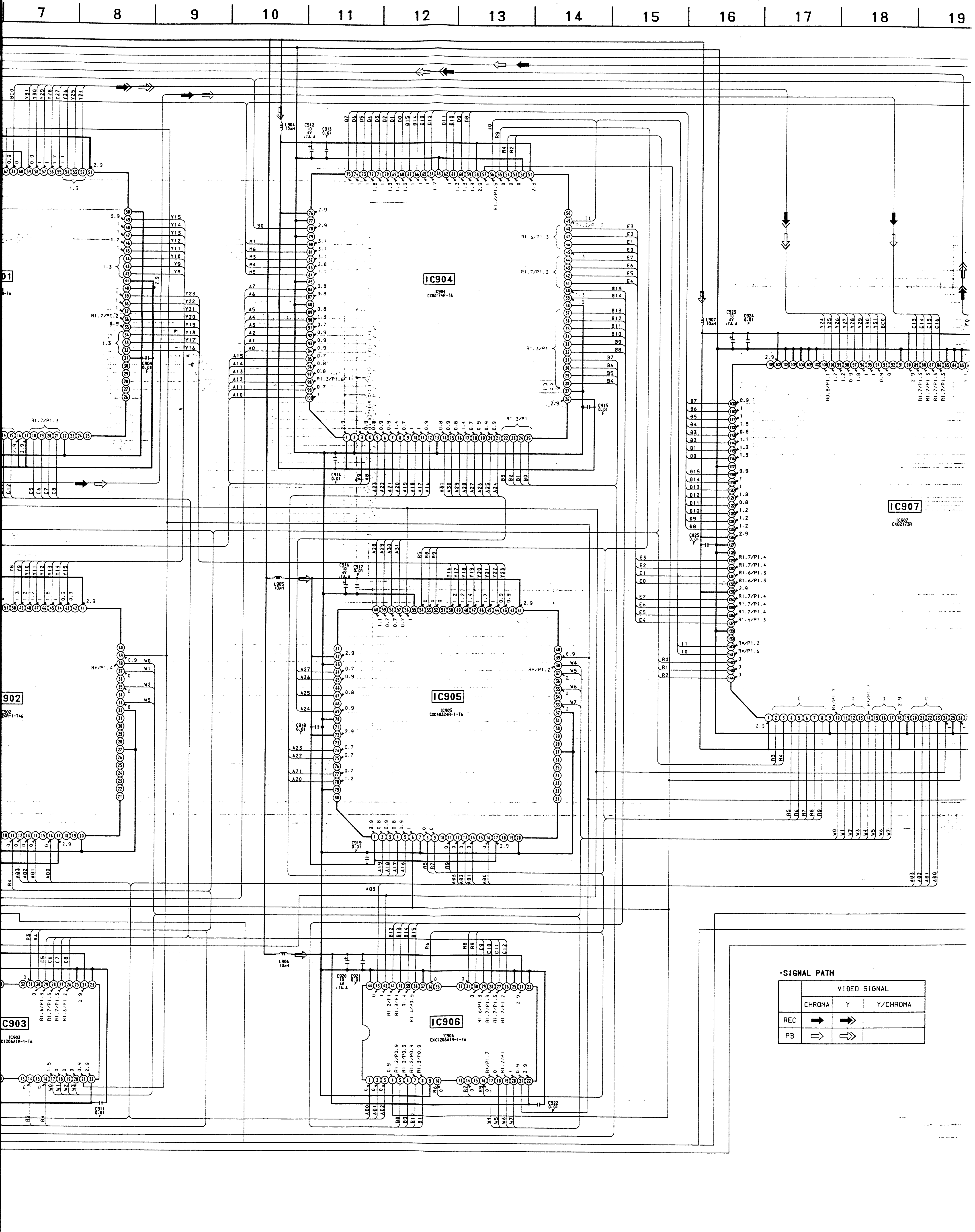
JC-18 (MAGIC) SCHEMATIC DIAGRAM

– Ref No. JC-18 BOARD: 2,000 series –

• Refer to page 4–15 for Printed Wiring Board.


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
K
L
M
N
JC-18 BOARD (3/10)
(MAGIC BLOCK)
no mark : REC/PB mode
R : REC mode
P : PB mode
* : Can not be measured.
TO
JC-18 BOARD (2/10)
10
(SEE PAGE 4-28)
TO
JC-18 BOARD (1/10)
7
(SEE PAGE 4-22)
J3.1V
GND
IC901
CXD2171R-T6
IC902
CXK48324R-1-T6
IC903
CXK1206ATM-1-T6
IC904
CXD2174R-T6
IC905
CXK48324R-1-T6
IC906
CXK1206ATM-1-T6
L901
10μH
L902
10μH
L903
10μH
L904
10μH
L905
10μH
L906
10μH
C901
10
4V
:TA A
C902
0.01
F
R902
0
BCO
09

Board.



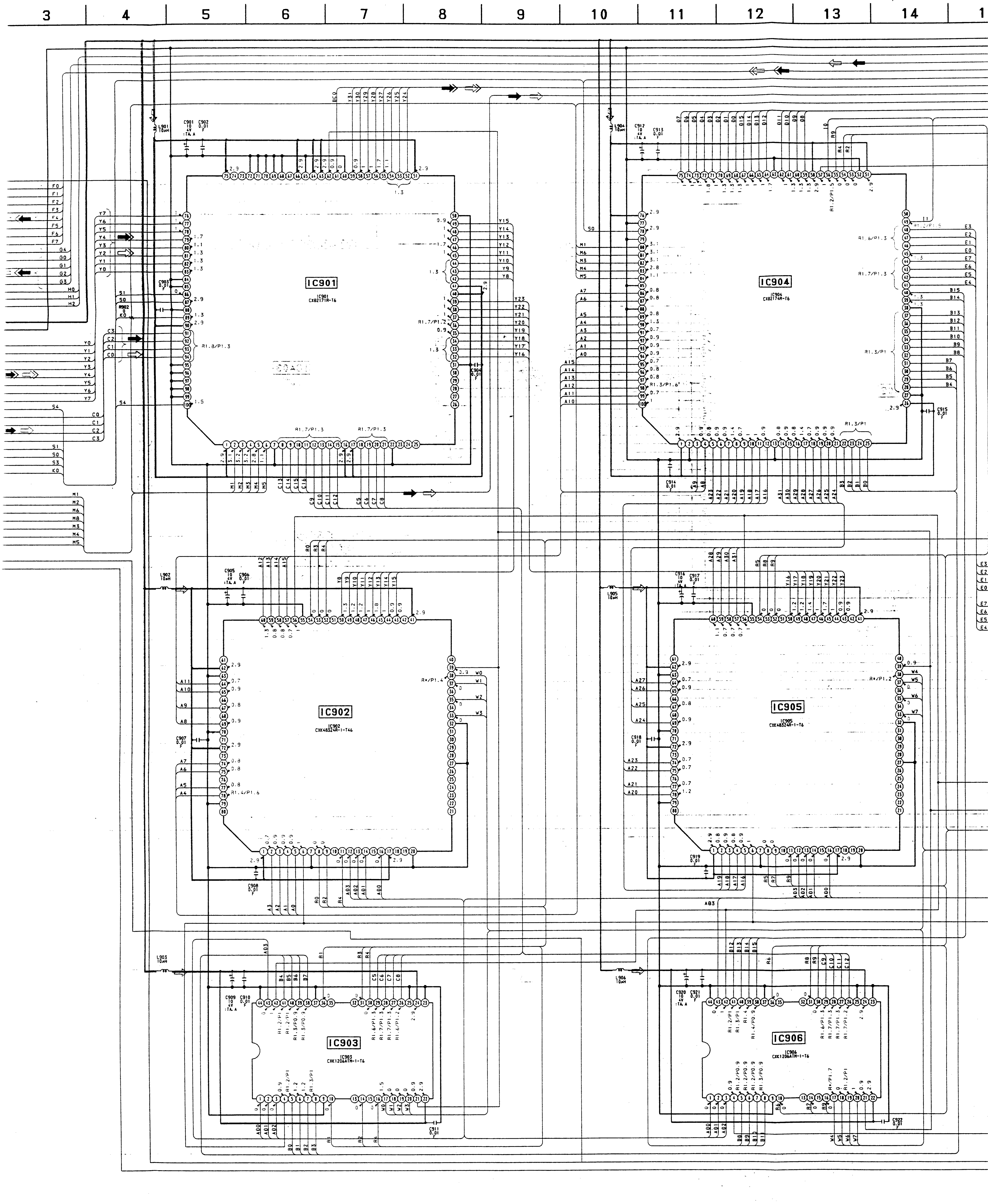
7
8
9
10
11
12
13
14
15
16
17
18
19
IC904
CXD2174R-T6
IC905
CXK48324R-1-T6
IC906
CXK1206ATM-1-T6
IC907
CXD2175R
IC903
CXK1206ATM-1-T6
IC902
L904 10μH
L905 10μH
L906 10μH
L907 10μH
C912 10 4V TA A
C913 0.01 F
C914 0.01 F
C915 0.01 F
C916 10 4V TA A
C917 0.01 F
C918 0.01 F
C919 0.01 F
C920 10 4V TA A
C921 0.01 F
C922 0.01 F
C923 10 4V TA A
C924 0.01 F
C925 0.01 F
C911 0.01 F

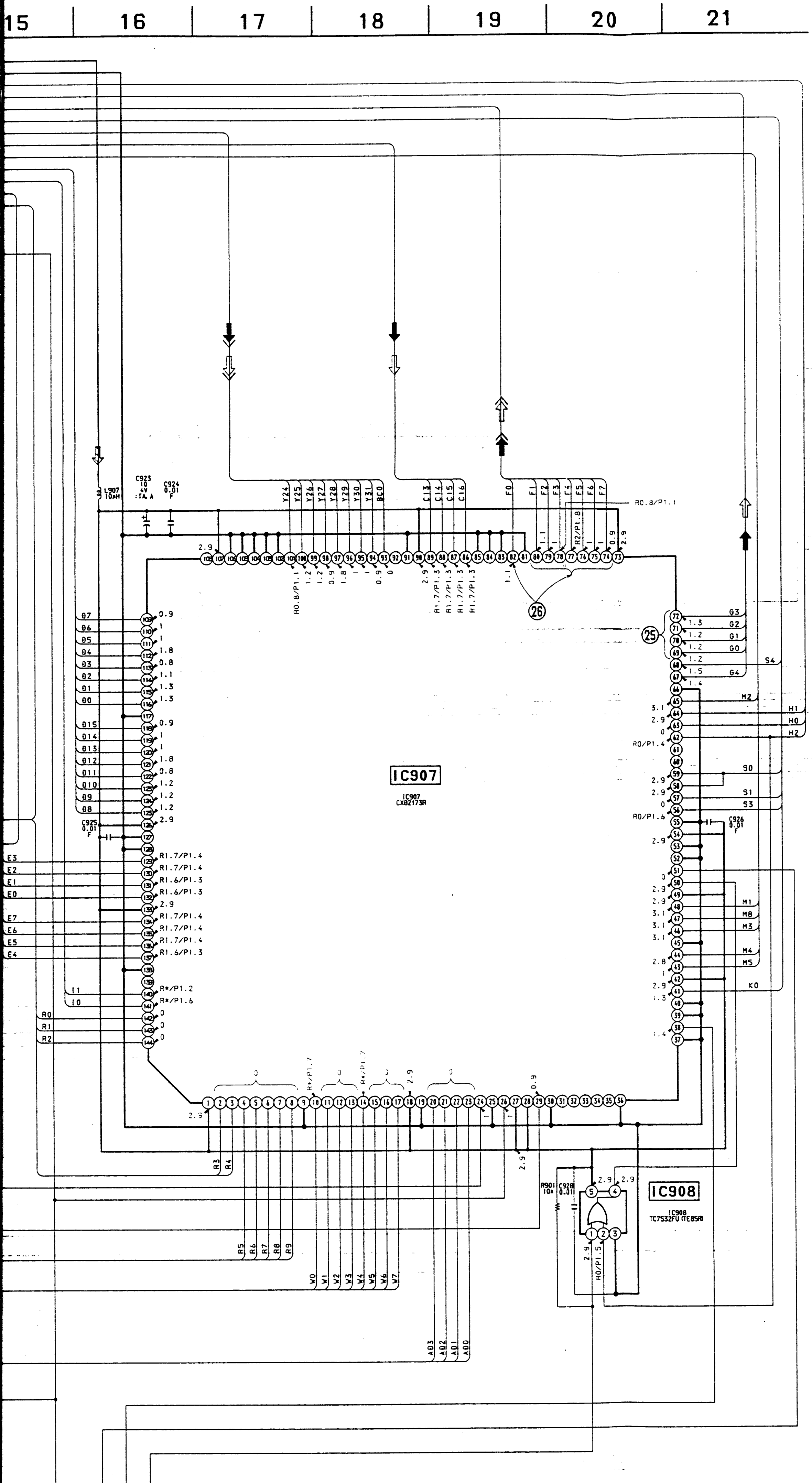
·SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	⇛	
PB	⇨	⇨	

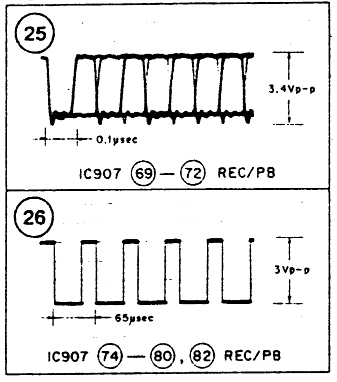
1

- Refer to page 4–15 for Printed Wiring Board.


3
4
5
6
7
8
9
10
11
12
13
14
IC901
IC901
CX82171R-T6
IC902
IC902
CXK48324R-1-T46
IC903
IC903
CXK1206ATM-1-T6
IC904
IC904
CX82174R-T6
IC905
IC905
CXK48324R-1-T6
IC906
IC906
CXK1206ATM-1-T6
L901
L902
L903
L904
L905
L906
C901
C902
C903
C904
C905
C906
C907
C908
C909
C910
C911
C912
C913
C914
C915
C916
C917
C918
C919
C920
C921
C922
R902


15
16
17
18
19
20
21
IC907
CX82173R
IC908
TC7S32FU (TE85R)
L907 10μH
C923 10 4V :TA A
C924 0.01 F
C925 0.01 F
C926 0.01 F
R901 10k
C928 0.01
Y24
Y25
Y26
Y27
Y28
Y29
Y30
Y31
BC0
C13
C14
C15
C16
F0
F1
F2
F3
F4
F5
F6
F7
R0.8/P1.1
G3
G2
G1
G0
G4
S4
M2
H1
H0
H2
S0
S1
S3
M1
M8
M3
M4
M5
K0
D7
D6
D5
D4
D3
D2
D1
D0
D15
D14
D13
D12
D11
D10
D9
D8
E3
E2
E1
E0
E7
E6
E5
E4
I1
I0
R0
R1
R2
R3
R4
R5
R6
R7
R8
R9
W0
W1
W2
W3
W4
W5
W6
W7
A03
A02
A01
A00
25
26

JC-18 BOARD (3/10)



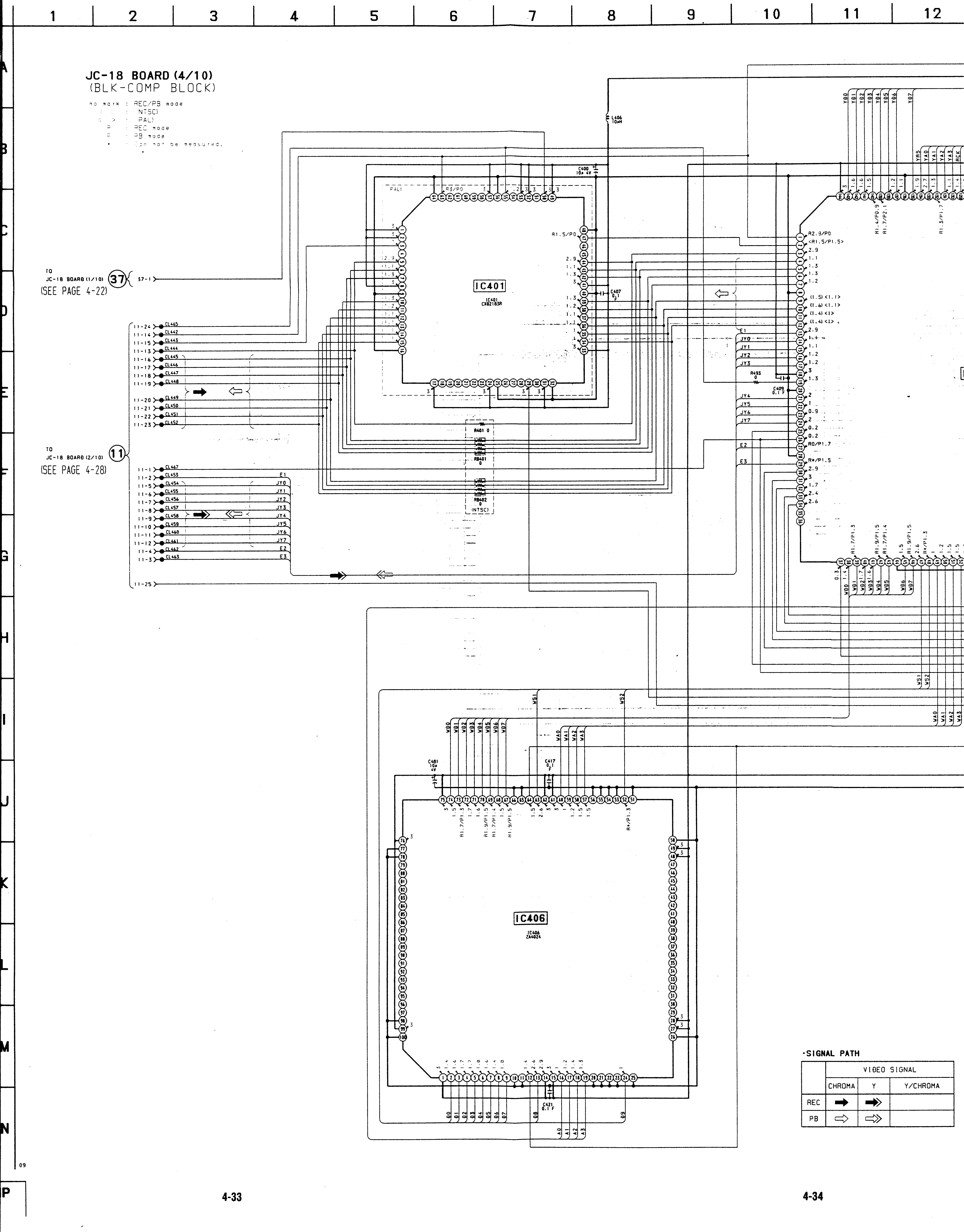
·SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡⟫	
PB	⇨	⇨⟫	

(BLK-COMP) SCHEMATIC DIAGRAM

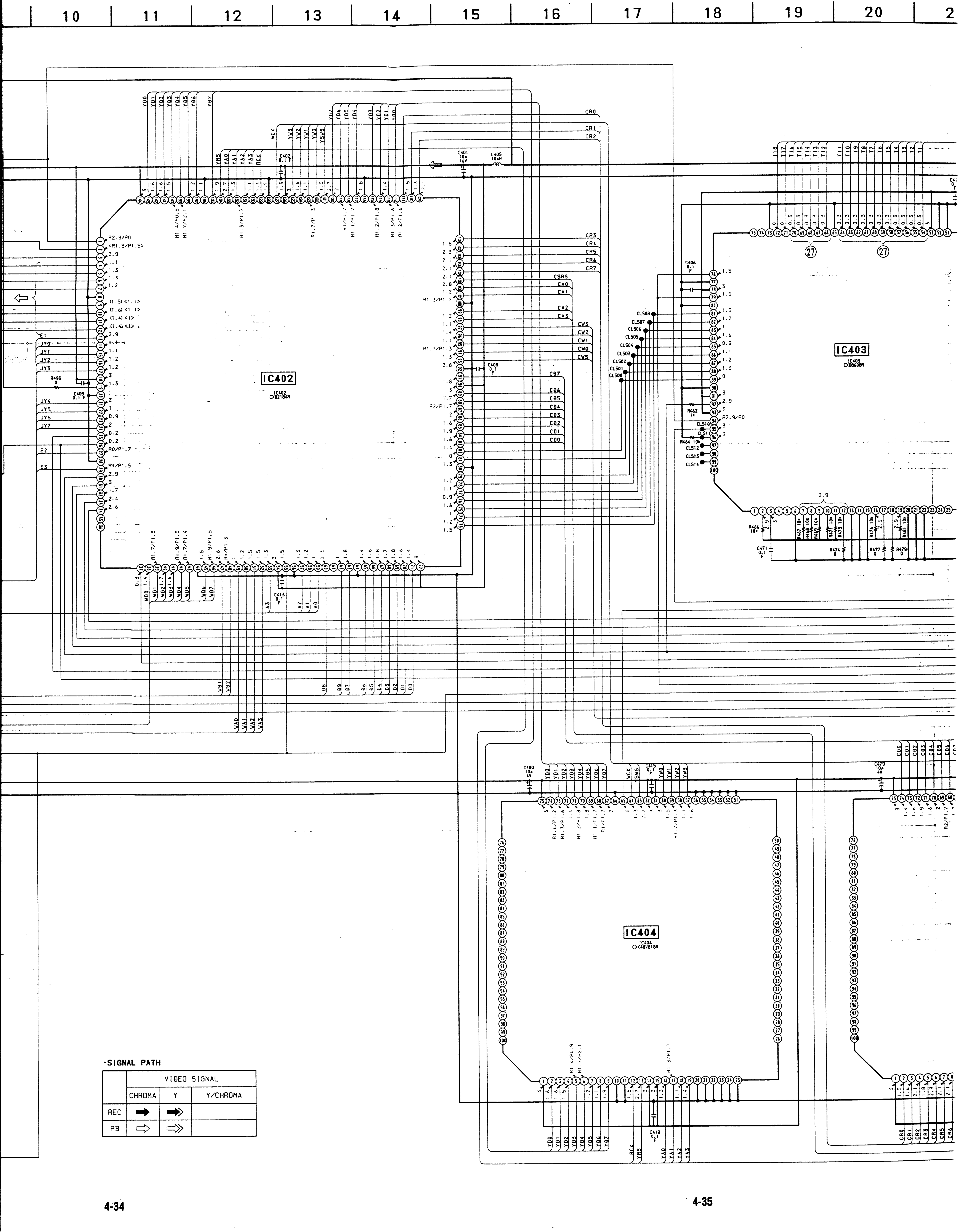
. JC-18 BOARD: 2,000 series –

• Refer to page 4–15 for Printed Wiring Board.


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
K
L
M
N
JC-18 BOARD (4/10)
(BLK-COMP BLOCK)
no mark : REC/PB mode
( ) : NTSC
< > : PAL
: REC mode
: PB mode
* : Can not be measured.
TO JC-18 BOARD (1/10)
37
(SEE PAGE 4-22)
37-1
TO JC-18 BOARD (2/10)
11
(SEE PAGE 4-28)
11-24
11-14
11-15
11-13
11-16
11-17
11-18
11-19
11-20
11-21
11-22
11-23
11-1
11-2
11-5
11-6
11-7
11-8
11-9
11-10
11-11
11-12
11-4
11-3
11-25
CL465
CL442
CL443
CL444
CL445
CL446
CL447
CL448
CL449
CL450
CL451
CL452
CL467
CL453
CL454
CL455
CL456
CL457
CL458
CL459
CL460
CL461
CL462
CL463
E1
JY0
JY1
JY2
JY3
JY4
JY5
JY6
JY7
E2
E3
IC401
IC401
CXD2183R
L406
10μH
C400
10μ 4V
C407
0.1
F
R401 0
RB401
0
RB402
0
(NTSC)
R493
0
C409
0.1 F
R1.5/P0
R3/P0
PAL)
R2.9/P0
<R1.5/P1.5>
R0/P1.7
R*/P1.5
Y00
Y01
Y02
Y03
Y04
Y05
Y06
Y07
YRS
YA0
YA1
YA2
YA3
RCK
WD0
WD1
WD2
WD3
WD4
WD5
WD6
WD7
WS1
WS2
WA0
WA1
WA2
WA3
IC406
IC406
ZA4024
C481
10μ
4V
C417
0.1
F
C421
0.1 F
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
A0
A1
A2
A3
09

-SIGNAL PATH

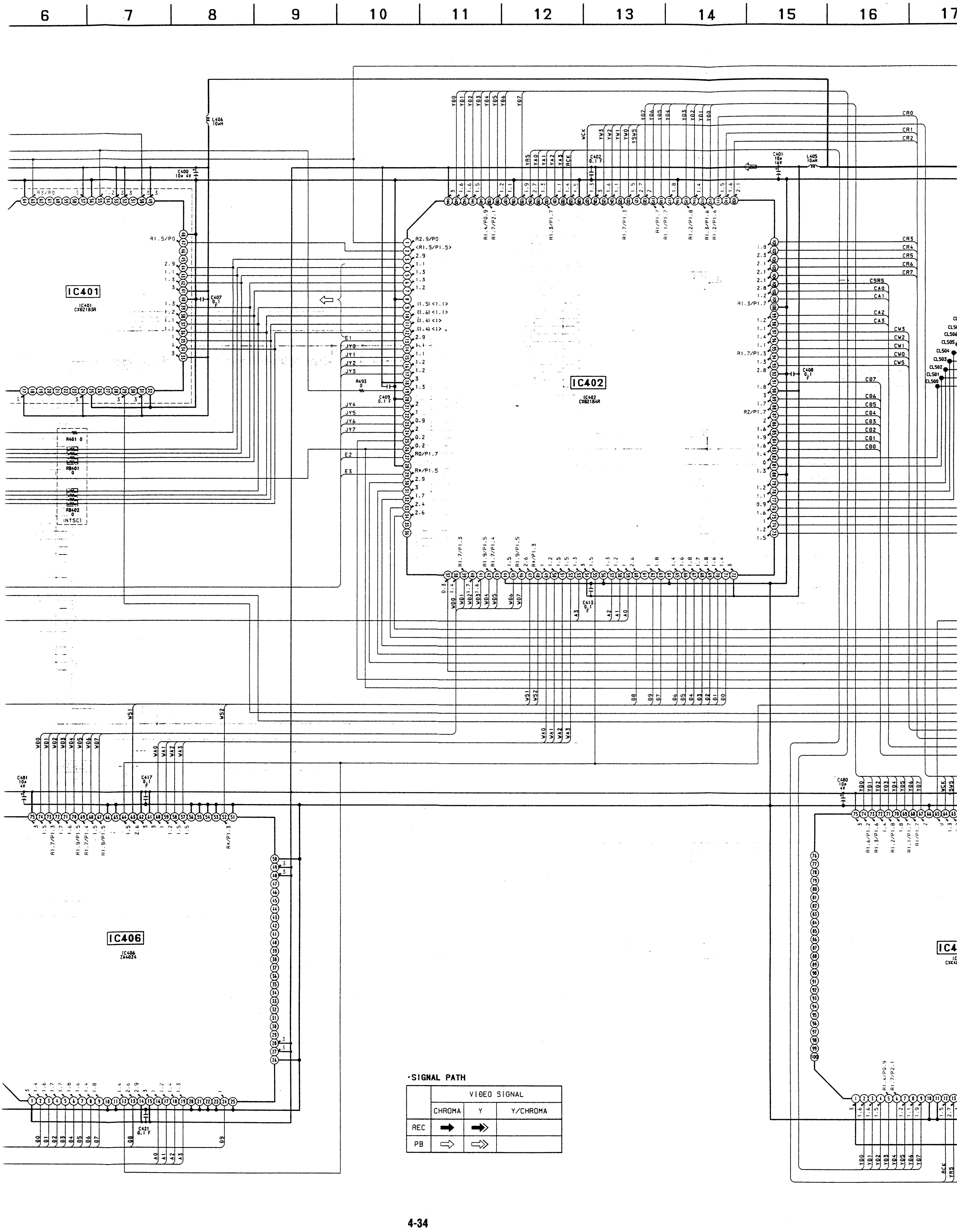
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	⇛	
PB	⇨	⇨	


10
11
12
13
14
15
16
17
18
19
20
2
IC402
IC402
CXB2184R
IC403
IC403
CX88608R
IC404
IC404
CXK48V818R
YO0
YO1
YO2
YO3
YO4
YO5
YO6
YO7
WCK
YW3
YW2
YW1
YW0
YSWS
YRS
YA0
YA1
YA2
YA3
RCK
CR0
CR1
CR2
CR3
CR4
CR5
CR6
CR7
CSRS
CA0
CA1
CA2
CA3
CW3
CW2
CW1
CW0
CWS
CO7
CO6
CO5
CO4
CO3
CO2
CO1
CO0
JY0
JY1
JY2
JY3
JY4
JY5
JY6
JY7
E1
E2
E3
R493
0
C409
0.1
C401
10μ
16V
L405
10μH
C402
0.1
C408
0.1
C413
0.1
C406
0.1
C415
0.1
C419
0.1
C471
0.1
C479
10μ
4V
C480
10μ
4V
R464
10k
R466
10k
R462
1k
R474
0
R477
0
R479
0
WS1
WS2
WA0
WA1
WA2
WA3
WO0
WO1
WO2
WO3
WO4
WO5
WO6
WO7
A0
A1
A2
A3
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
CL500
CL501
CL502
CL503
CL504
CL505
CL506
CL507
CL508
CL510
CL511
CL512
CL513
CL514
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
T11
T12
T13
T14
T15
T16
T17
T18
㉗
㉗
R2.9/P0
R1.5/P1.5
R0/P1.7
R4/P1.5
R1.3/P1.7
R1.7/P1.3
R2/P1.7
R1.4/P0.9
R1.7/P2.1
R1.9/P1.5
R1.7/P1.4
R1.2/P1.8
R1.1/P1.7
R1.6/P1.2
R1.3/P1.6
R1.5/P1.6
R1.2/P1.6

·SIGNAL PATH

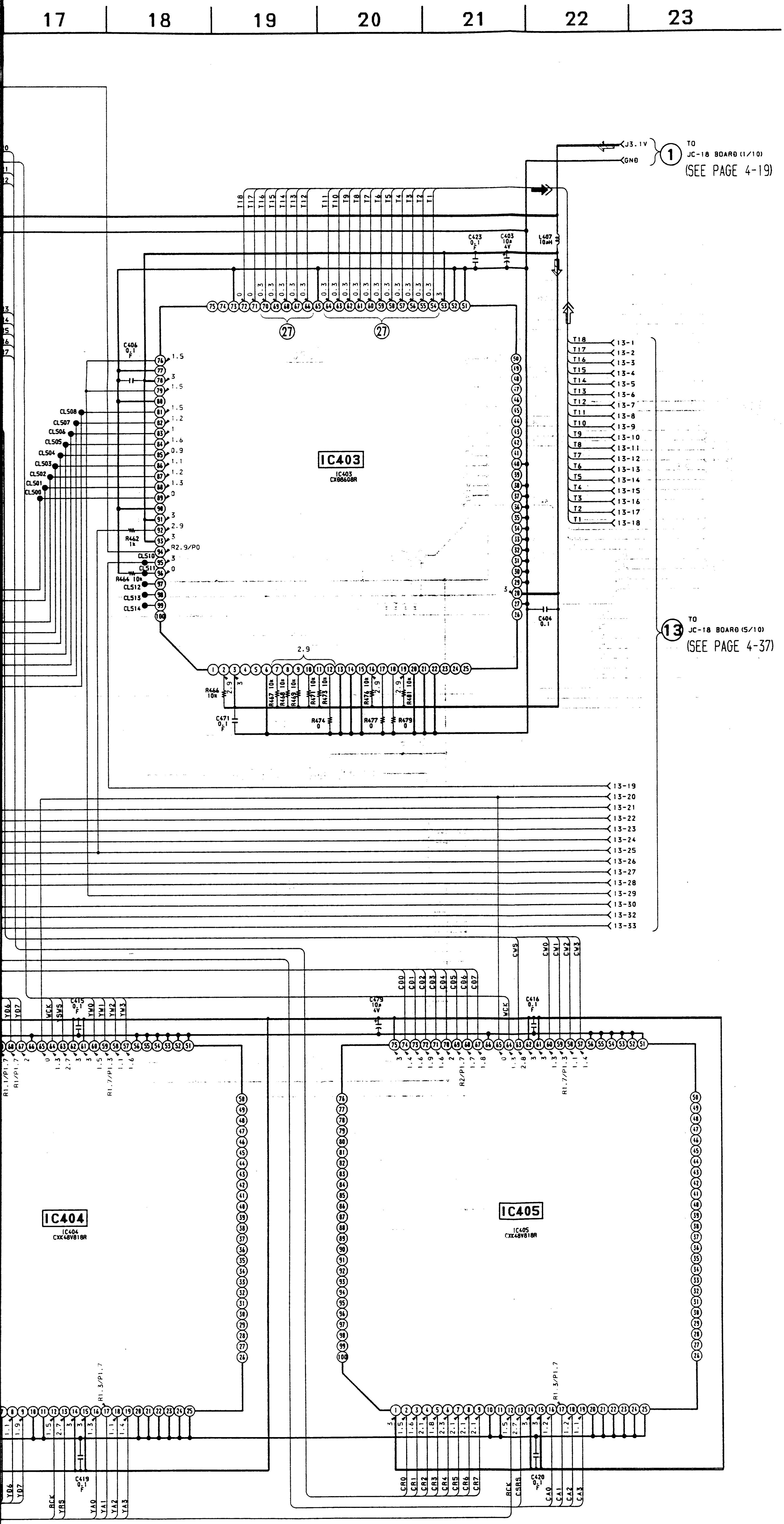
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	⇛	
PB	⇨	⇨	

; Board.

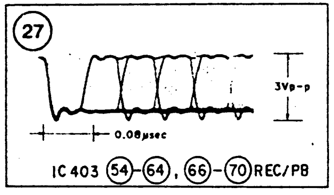

6
7
8
9
10
11
12
13
14
15
16
17
IC401
IC401 CXD2185R
IC402
IC402 CXD2184R
IC406
IC406 ZA4024
L406 10μH
L405 10μH
C400 10μ 4V
C401 10μ 16V
C402 0.1 F
C407 0.1 F
C408 0.1 F
C409 0.1 F
C413 0.1 F
C417 0.1 F
C421 0.1 F
C480 10μ 4V
C481 10μ 4V
R401 0
RB401 0
RB402 0 (NTSC)
R493 0
E1
E2
E3
JY0
JY1
JY2
JY3
JY4
JY5
JY6
JY7
WS1
WS2
WCK
YRS
RCK
CR0
CR1
CR2
CR3
CR4
CR5
CR6
CR7
CSRS
CA0
CA1
CA2
CA3
CW0
CW1
CW2
CW3
CWS
C00
C01
C02
C03
C04
C05
C06
C07

·SIGNAL PATH

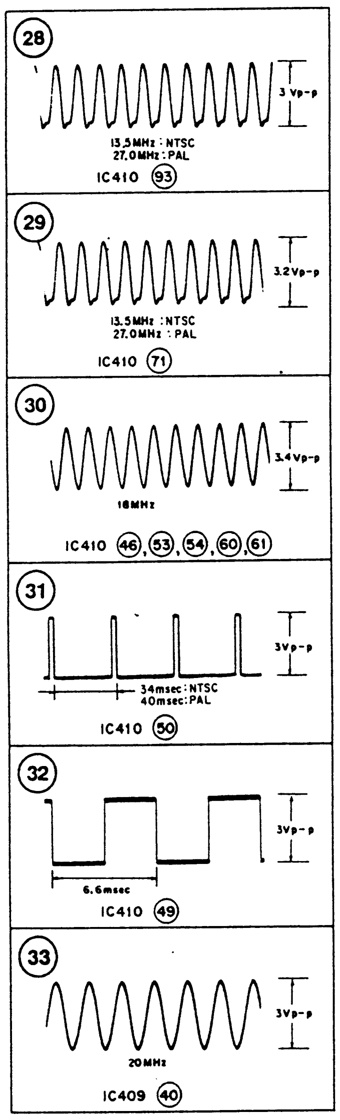
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡➡	
PB	⇨	⇨⇨	


17
18
19
20
21
22
23
J3.1V
GND
1
TO JC-18 BOARD (1/10)
(SEE PAGE 4-19)
T18 T17 T16 T15 T14 T13 T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 T1
C423 0.1 F
C403 10μ 4V
L407 10μH
C406 0.1 F
CL508
CL507
CL506
CL505
CL504
CL503
CL502
CL501
CL500
R462 1k
R2.9/P0
CL510
CL511
R464 10k
CL512
CL513
CL514
IC403
IC403 CXD8608R
27
C404 0.1
13
TO JC-18 BOARD (5/10)
(SEE PAGE 4-37)
R466 10k
C471 0.1 F
R474 0
R477 0
R479 0
13-1 13-2 13-3 13-4 13-5 13-6 13-7 13-8 13-9 13-10 13-11 13-12 13-13 13-14 13-15 13-16 13-17 13-18
13-19 13-20 13-21 13-22 13-23 13-24 13-25 13-26 13-27 13-28 13-29 13-30 13-32 13-33
YD6 YD7 WCK SWS YW0 YW1 YW2 YW3
C415 0.1 F
IC404
IC404 CXK48V818R
C419 0.1 F
RCK YRS YA0 YA1 YA2 YA3
CWS CW0 CW1 CW2 CW3
CD0 CD1 CD2 CD3 CD4 CD5 CD6 CD7
C479 10μ 4V
C416 0.1 F
IC405
IC405 CXK48V818R
C420 0.1 F
CR0 CR1 CR2 CR3 CR4 CR5 CR6 CR7
RCK CSRS CA0 CA1 CA2 CA3
R1.3/P1.7

JC-18 BOARD (4/10)



JC-18 BOARD (5/10) REC/PB

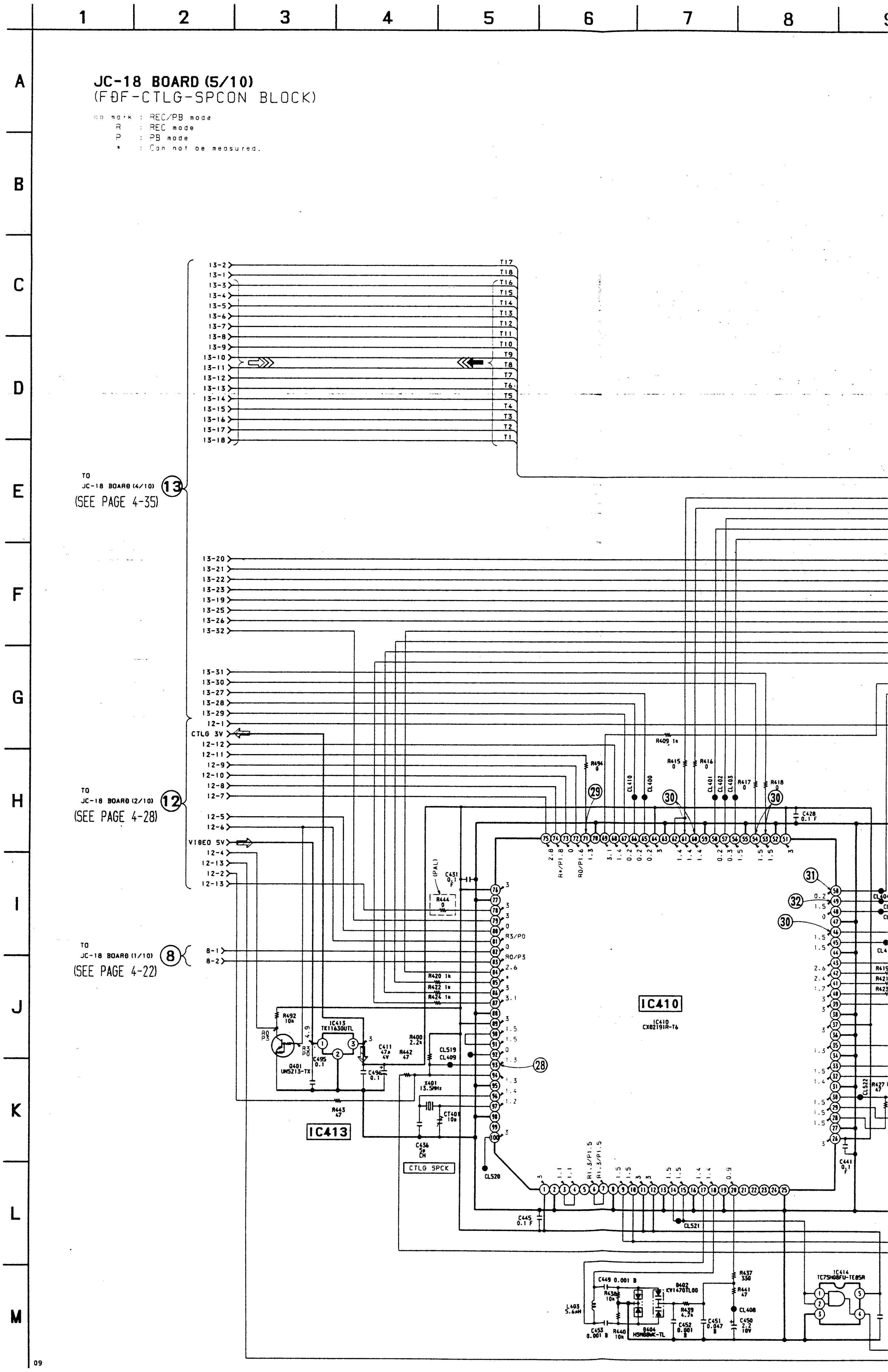


DSR-30 : NTSC model
DSR-30P : PAL model

JC-18 (FDF-CTLG-SPCON) SCHEMATIC DIAGRAM

– Ref No. JC-18 BOARD: 2,000 series –

• Refer to page 4–15 for Printed Wiring Board.



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A
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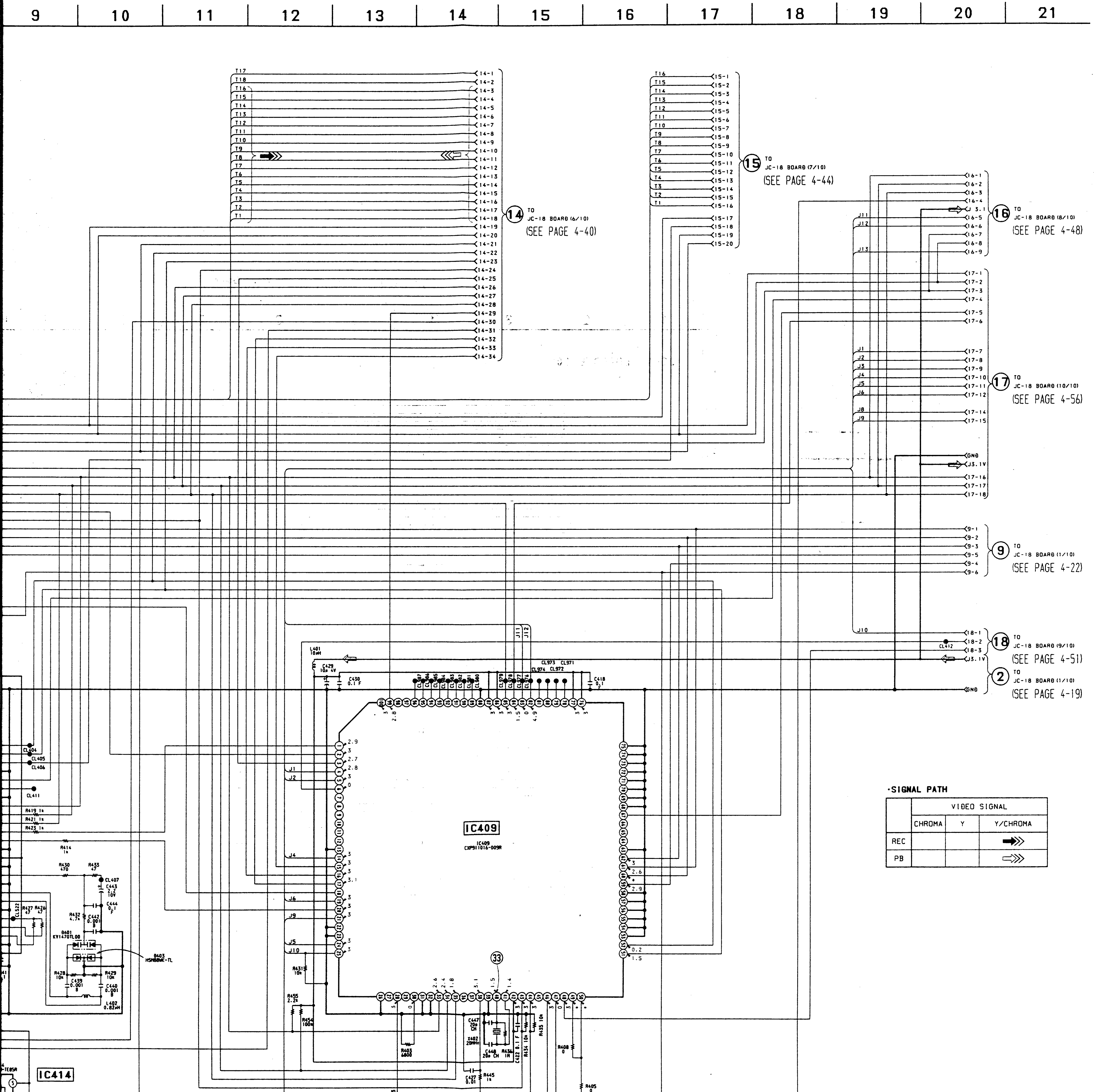
C
D
E
F
G
H
I
J
K
L
M
JC-18 BOARD (5/10)
(FDF-CTLG-SPCON BLOCK)
R : REC mode
P : PB mode
* : Can not be measured.
TO
JC-18 BOARD (4/10)
(SEE PAGE 4-35)
TO
JC-18 BOARD (2/10)
(SEE PAGE 4-28)
TO
JC-18 BOARD (1/10)
(SEE PAGE 4-22)
CTLG 3V
VIDEO 5V
IC410
CX02191R-T6
IC413
TK11630UTL
Q401
UN5213-TX
X401
13.5MHz
CTLG SPCK
IC414
TC7SH08FU-TE85R
L403
5.6mH
CL520
CL521
CL408
09

rd.


9
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T17
T18
T16
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T12
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T8
T7
T6
T5
T4
T3
T2
T1
14-1
14-2
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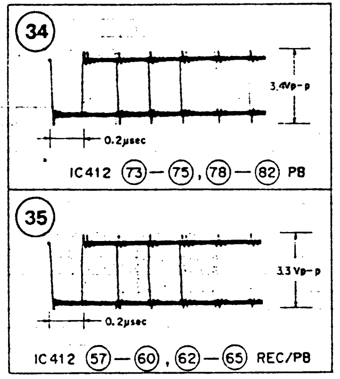
14-29
14-30
14-31
14-32
14-33
14-34
⑭ TO JC-18 BOARD (6/10) (SEE PAGE 4-40)
15-1
15-2
15-3
15-4
15-5
15-6
15-7
15-8
15-9
15-10
15-11
15-12
15-13
15-14
15-15
15-16
15-17
15-18
15-19
15-20
⑮ TO JC-18 BOARD (7/10) (SEE PAGE 4-44)
J11
J12
J13
16-1
16-2
16-3
16-4
J 3.1
16-5
16-6
16-7
16-8
16-9
⑯ TO JC-18 BOARD (8/10) (SEE PAGE 4-48)
17-1
17-2
17-3
17-4
17-5
17-6
J1
J2
J3
J4
J5
J6
J8
J9
17-7
17-8
17-9
17-10
17-11
17-12
17-14
17-15
GND
J3.1V
17-16
17-17
17-18
⑰ TO JC-18 BOARD (10/10) (SEE PAGE 4-56)
9-1
9-2
9-3
9-5
9-4
9-6
⑨ TO JC-18 BOARD (1/10) (SEE PAGE 4-22)
J10
18-1
18-2
18-3
J3.1V
CL412
⑱ TO JC-18 BOARD (9/10) (SEE PAGE 4-51)
GND
② TO JC-18 BOARD (1/10) (SEE PAGE 4-19)
L401 10μH
C429 10μ 4V
C430 0.1 F
CL987 CL986 CL985 CL984 CL983 CL982 CL981 CL980
CL979 CL978 CL977 CL976
CL973 CL971
CL974 CL972
C418 0.1 F
IC409
IC409 CXP911016-009R
㉝
R431 10k
R455 2.2k
R454 100k
R403 6800
C447 20p CH
X402 20MHz
C448 20p CH
R436 1M
C422 0.1 F
R434 10k
R435 10k
C427 0.01
R445 1k
R408 0
R405 0
J13
J2
J8
CL404
CL405
CL406
CL411
R419 1k
R421 1k
R423 1k
R414 1k
R430 470
R433 47
CL407
C443 2.2 10V
C444 0.1 F
CL522
R427 47
R426 47
R432 4.7k
C442 0.001 B
D401 KV1470TL00
D403 HSM88WK-TL
R428 10k
R429 10k
C439 0.001 B
C440 0.001 B
L402 0.82μH
IC414
-TE85R
C497 0.1 F

·SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			➡》
PB			⇨》

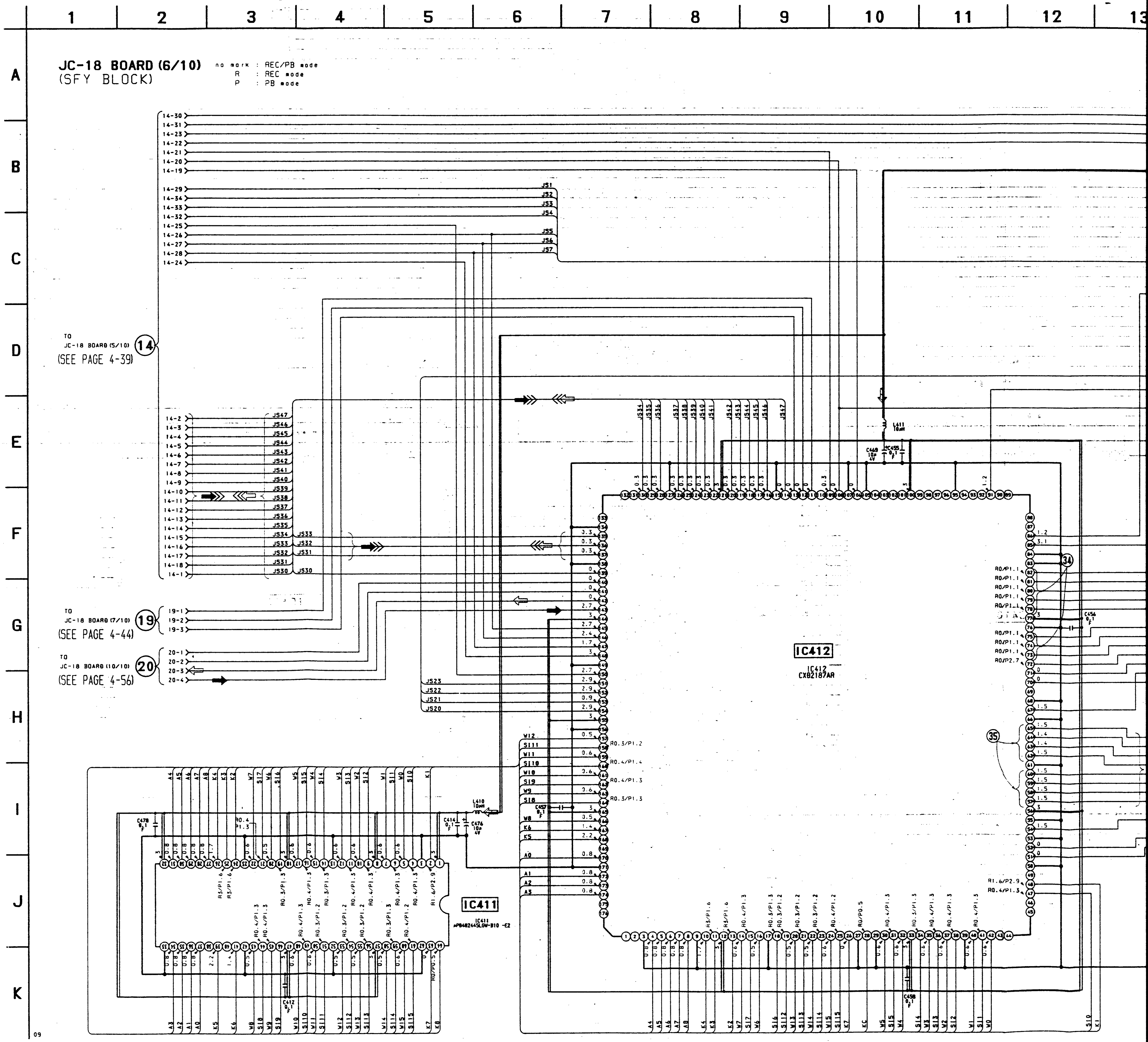
JC-18 BOARD (6/10)



JC-18 (SFY) SCHEMATIC DIAGRAM

– Ref No. JC-18 BOARD: 2,000 series –

• Refer to page 4–15 for Printed Wiring Board.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A
B
C
D
E
F
G
H
I
J
K
JC-18 BOARD (6/10)
(SFY BLOCK)
no mark : REC/PB mode
R : REC mode
P : PB mode
TO
JC-18 BOARD (5/10)
14
(SEE PAGE 4-39)
TO
JC-18 BOARD (7/10)
19
(SEE PAGE 4-44)
TO
JC-18 BOARD (10/10)
20
(SEE PAGE 4-56)
IC412
IC412
CX02187AR
IC411
IC411
μPD482445LGW-B10 -E2
L411
10μH
L410
10μH
C456
C457
C459
C460
C474
C476
C478
C412
C458
34
35
09

SCHEMATIC DIAGRAM

OARD: 2,000 series –

• Refer to page 4–15 for Printed Wiring Board.

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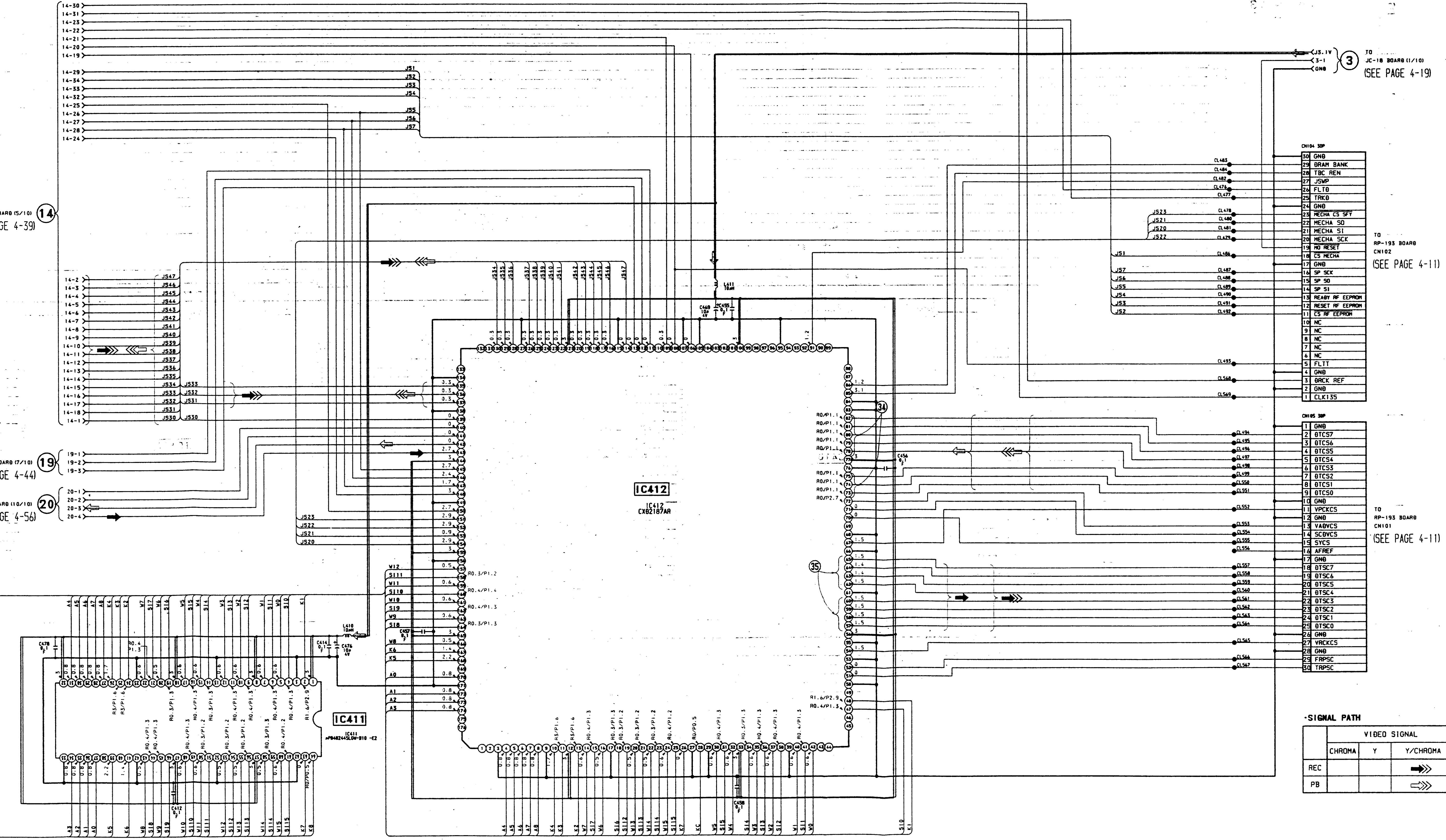
19

8 BOARD (6/10)
BLOCK)

no mark : REC/PB mode
R : REC mode
P : PB mode


14-30
14-31
14-23
14-22
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14-33
14-32
14-25
14-26
14-27
14-28
14-24
ARD (5/10)
14
GE 4-39)
14-2
14-3
14-4
14-5
14-6
14-7
14-8
14-9
14-10
14-11
14-12
14-13
14-14
14-15
14-16
14-17
14-18
14-1
ARD (7/10)
19
GE 4-44)
19-1
19-2
19-3
ARD (10/10)
20
GE 4-56)
20-1
20-2
20-3
20-4
J3.1V
3-1
GND
3
TO
JC-18 BOARD (1/10)
(SEE PAGE 4-19)
CN104 30P
30 GND
29 DRAM BANK
28 TBC REN
27 JSWP
26 FLTD
25 TRKD
24 GND
23 MECHA CS SFY
22 MECHA SO
21 MECHA SI
20 MECHA SCK
19 MO RESET
18 CS MECHA
17 GND
16 SP SCK
15 SP SO
14 SP SI
13 READY RF EEPROM
12 RESET RF EEPROM
11 CS RF EEPROM
10 NC
9 NC
8 NC
7 NC
6 NC
5 FLTT
4 GND
3 DRCK REF
2 GND
1 CLK135
TO
RP-193 BOARD
CN102
(SEE PAGE 4-11)
CN105 30P
1 GND
2 DTCS7
3 DTCS6
4 DTCS5
5 DTCS4
6 DTCS3
7 DTCS2
8 DTCS1
9 DTCS0
10 GND
11 VPCKCS
12 GND
13 VADVCS
14 SCDVCS
15 SYCS
16 AFREF
17 GND
18 DTSC7
19 DTSC6
20 DTSC5
21 DTSC4
22 DTSC3
23 DTSC2
24 DTSC1
25 DTSC0
26 GND
27 VRCKCS
28 GND
29 FRPSC
30 TRPSC
TO
RP-193 BOARD
CN101
(SEE PAGE 4-11)
IC412
IC412
CX82187AR
IC411
IC411
μPD482445LGW-B10 -E2
L411
10μH
L410
10μH
C468
C455
C456
C457
C458
C474
C476
C478
C412
34
35

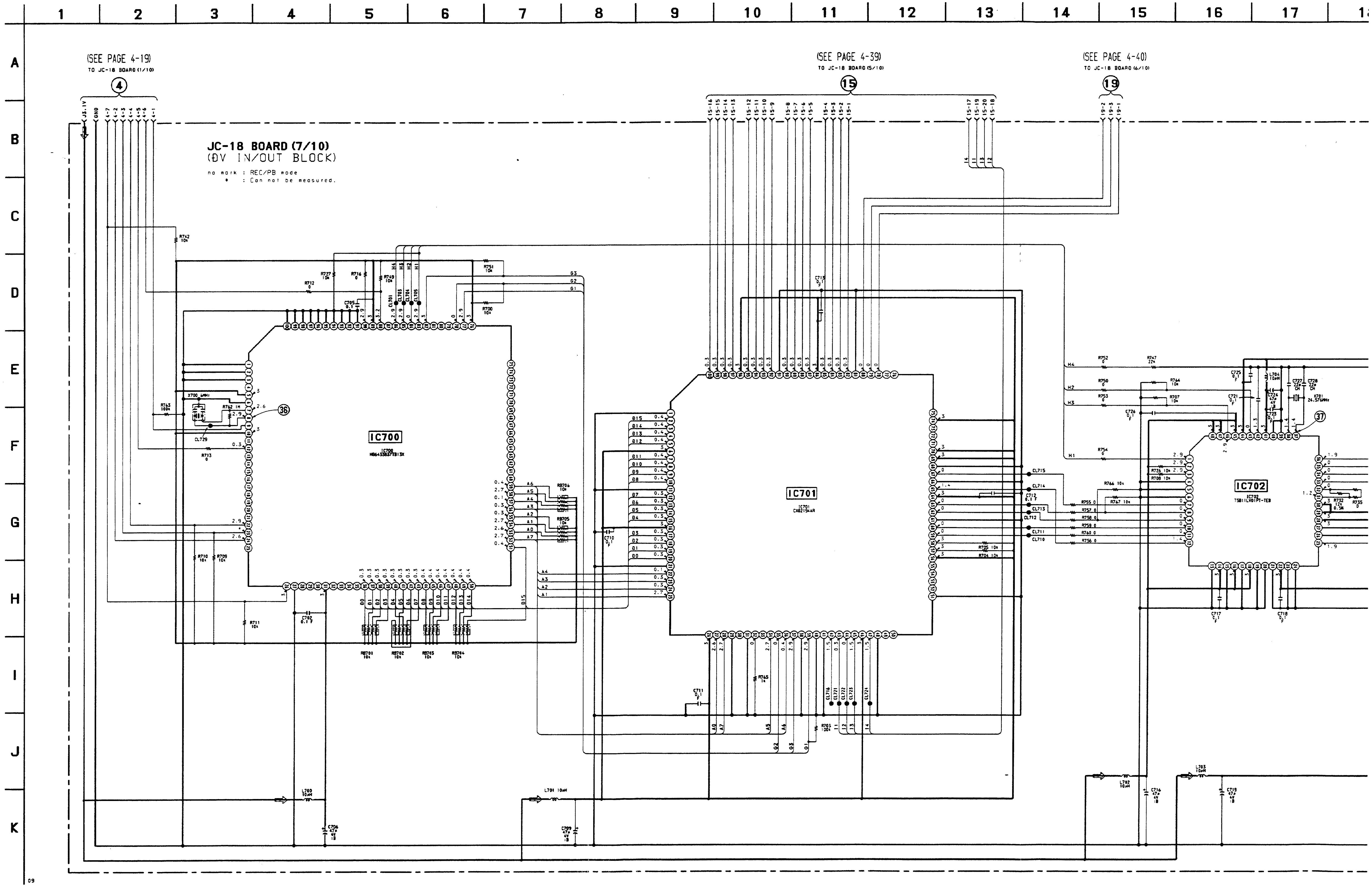
·SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC			➡》	➡
PB			⇨》	⇨

JC-18, IN-51 (DV IN/OUT) SCHEMATIC DIAGRAMS

– Ref No. JC-18 BOARD: 2,000 series, IN-51 BOARD: 1,000 series–

• Refer to page 4–15 for Printed Wiring Board.



JC-18 BOARD (7/10)
(DV IN/OUT BLOCK)
no mark : REC/PB mode
* : Can not be measured.
(SEE PAGE 4-19)
TO JC-18 BOARD (1/10)
④
(SEE PAGE 4-39)
TO JC-18 BOARD (5/10)
⑮
(SEE PAGE 4-40)
TO JC-18 BOARD (6/10)
⑲
IC700
IC701
CXD2194AR
IC702
TSB11LV01PT-TEB
X700
X701
24.576MHz
㊱
㊲
L700
10μH
L701 10μH
L702
10μH
L703
10μH
C706
47μ
4V
C709
47μ
4V
C714
47μ
4V
C719
47μ
4V
C717
0.1
C718
0.1
C711
0.1
C702
0.1 F
C710
0.1
C712
0.1 F
C715
0.1
RB701
10k
RB702
10k
RB703
10k
RB704
10k
RB705
10k
RB706
10k
R742
10k
R763
100k
R710
10k
R709
10k
R711
10k
R713
0
R745
1k
R705 10k
R704 10k
R755 0
R757 0
R758 0
R759 0
R760 0
R756 0
R766 10k
R767 10k
R752
0
R747
22k
R750
0
R753
0
R754
0
R764
10k
R707
10k
CL715
CL714
CL713
CL712
CL711
CL710
H1
H2
H3
H4
G1
G2
G3
A0
A1
A2
A3
A4
A5
A6
A7
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
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16
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A
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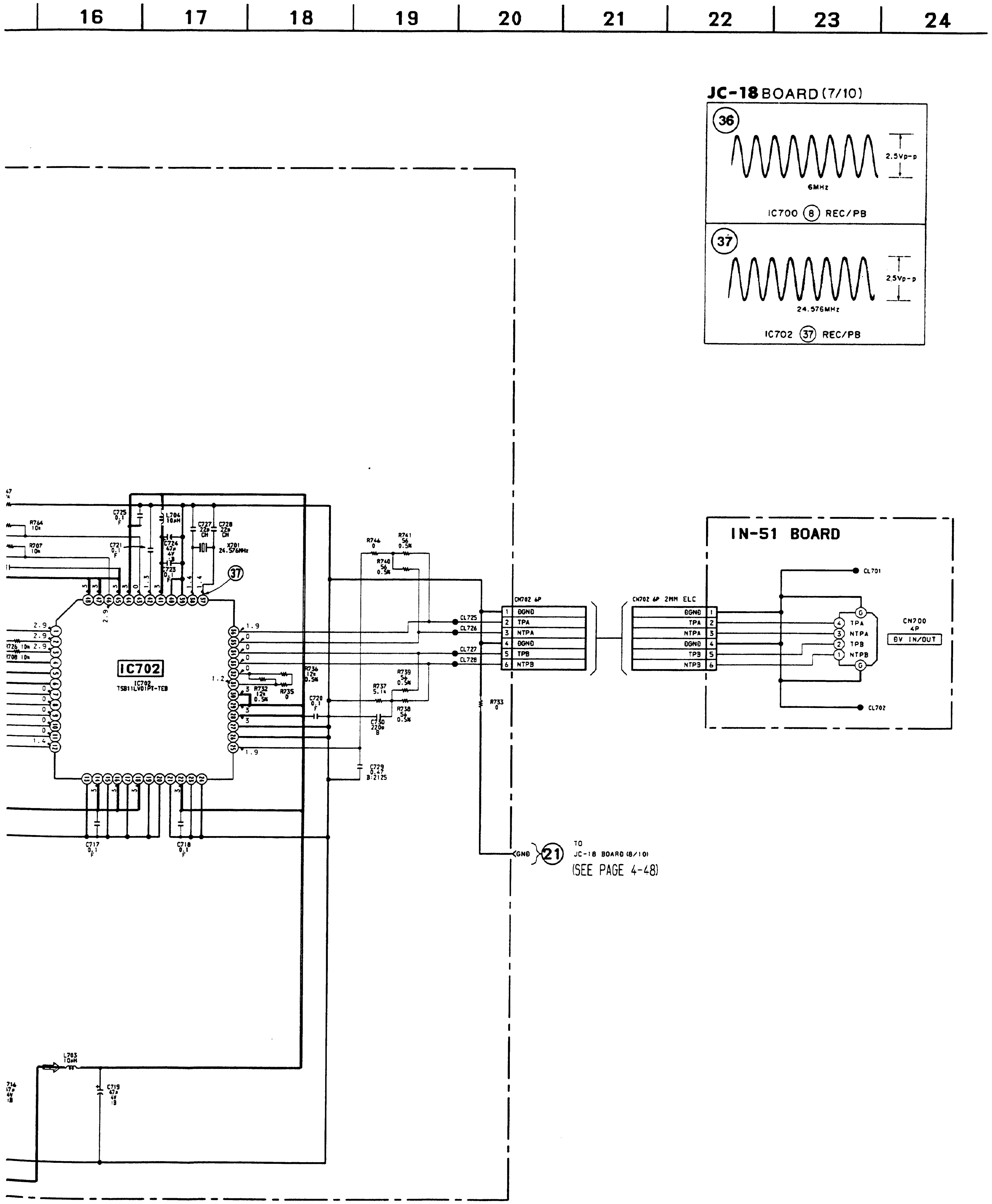
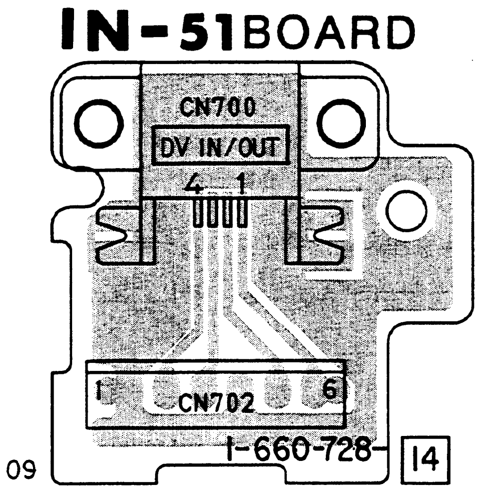
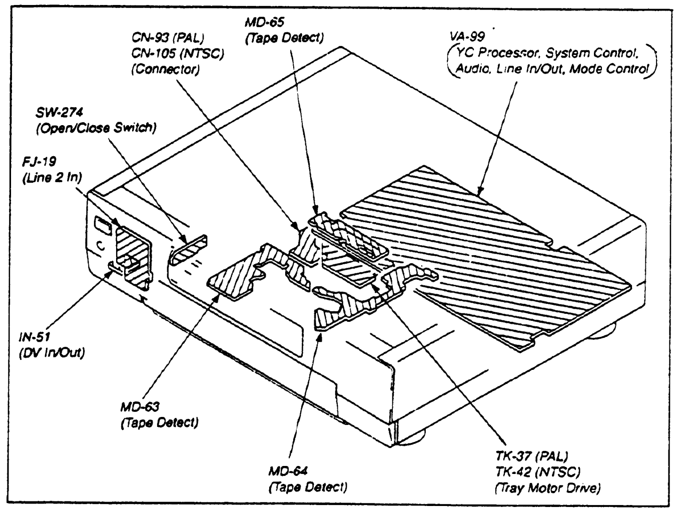

16
17
18
19
20
21
22
23
24
JC-18 BOARD (7/10)
36
2.5Vp-p
6MHz
IC700 8 REC/PB
37
2.5Vp-p
24.576MHz
IC702 37 REC/PB
IC702
IC702 TSB11LV01PT-TEB
X701 24.576MHz
CN702 6P
1 DGND
2 TPA
3 NTPA
4 DGND
5 TPB
6 NTPB
CL725
CL726
CL727
CL728
IN-51 BOARD
CN702 6P 2MM ELC
DGND 1
TPA 2
NTPA 3
DGND 4
TPB 5
NTPB 6
CL701
CL702
CN700 4P
DV IN/OUT
TO JC-18 BOARD (8/10)
GND 21
(SEE PAGE 4-48)

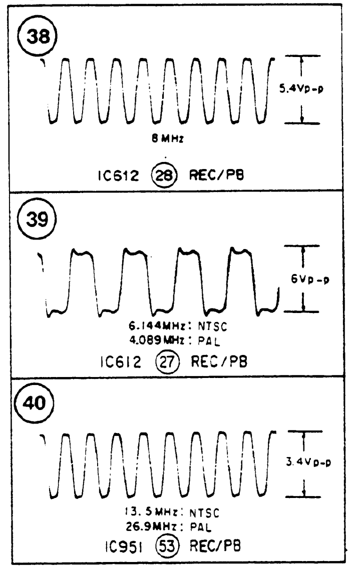
IN-51 (DV IN/OUT) PRINTED WIRING BOARD

– Ref No. IN-51 BOARD: 1,000 series –


IN-51BOARD
CN700
DV IN/OUT
4 1
1
CN702
6
09
1-660-728-
14


MD-65 (Tape Detect)
CN-93 (PAL) CN-105 (NTSC) (Connector)
VA-99 (YC Processor, System Control, Audio, Line In/Out, Mode Control)
SW-274 (Open/Close Switch)
FJ-19 (Line 2 In)
IN-51 (DV In/Out)
MD-63 (Tape Detect)
MD-64 (Tape Detect)
TK-37 (PAL) TK-42 (NTSC) (Tray Motor Drive)

JC-18 BOARD (8/10)

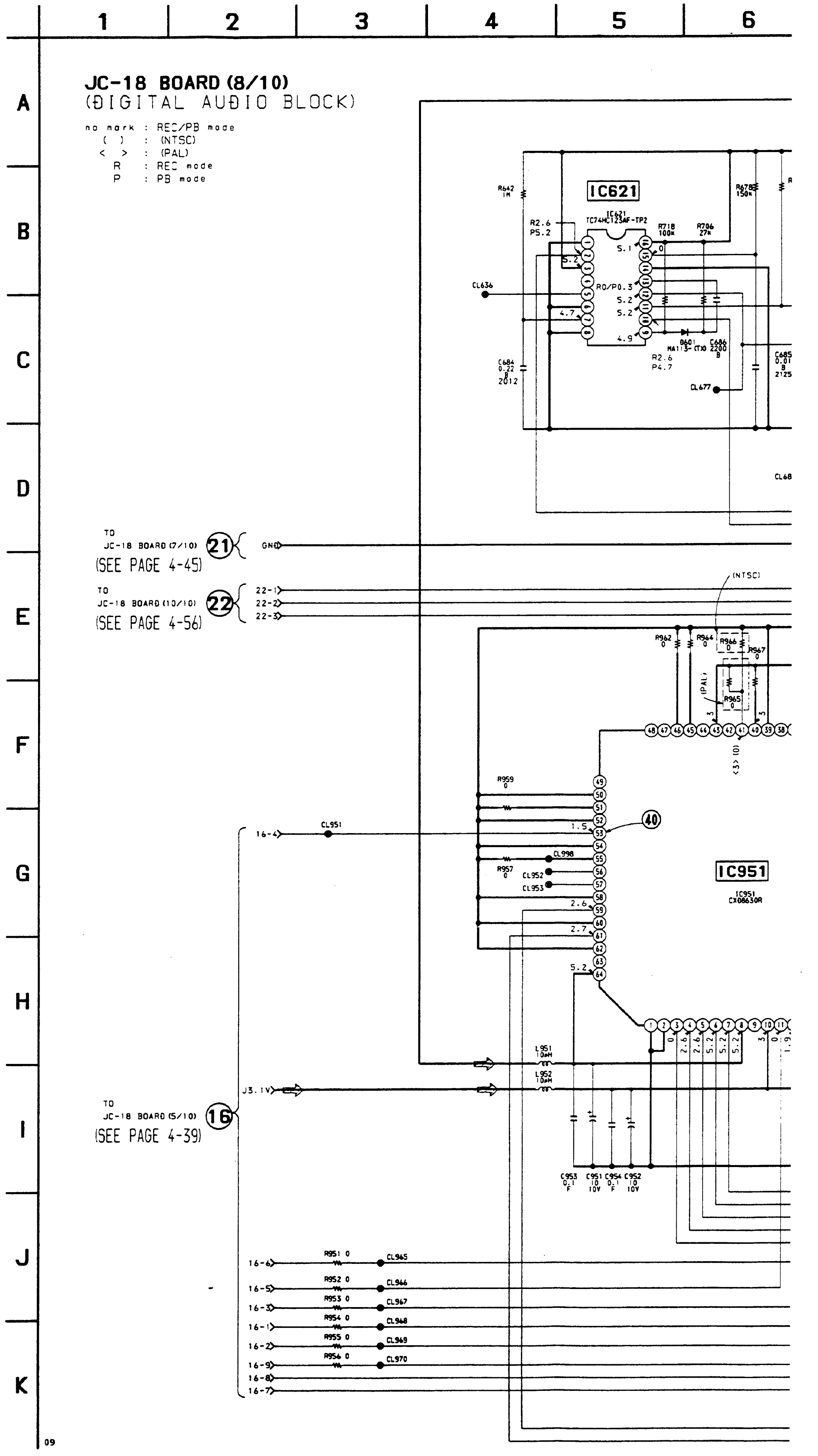


DSR-30:NTSC model
DSR-30P:PAL model

JC-18 (DIGITAL AUDIO) SCHEMATIC DIAGRAM

– Ref No. JC-18 BOARD: 2,000 series –

• Refer to page 4–15 for Prin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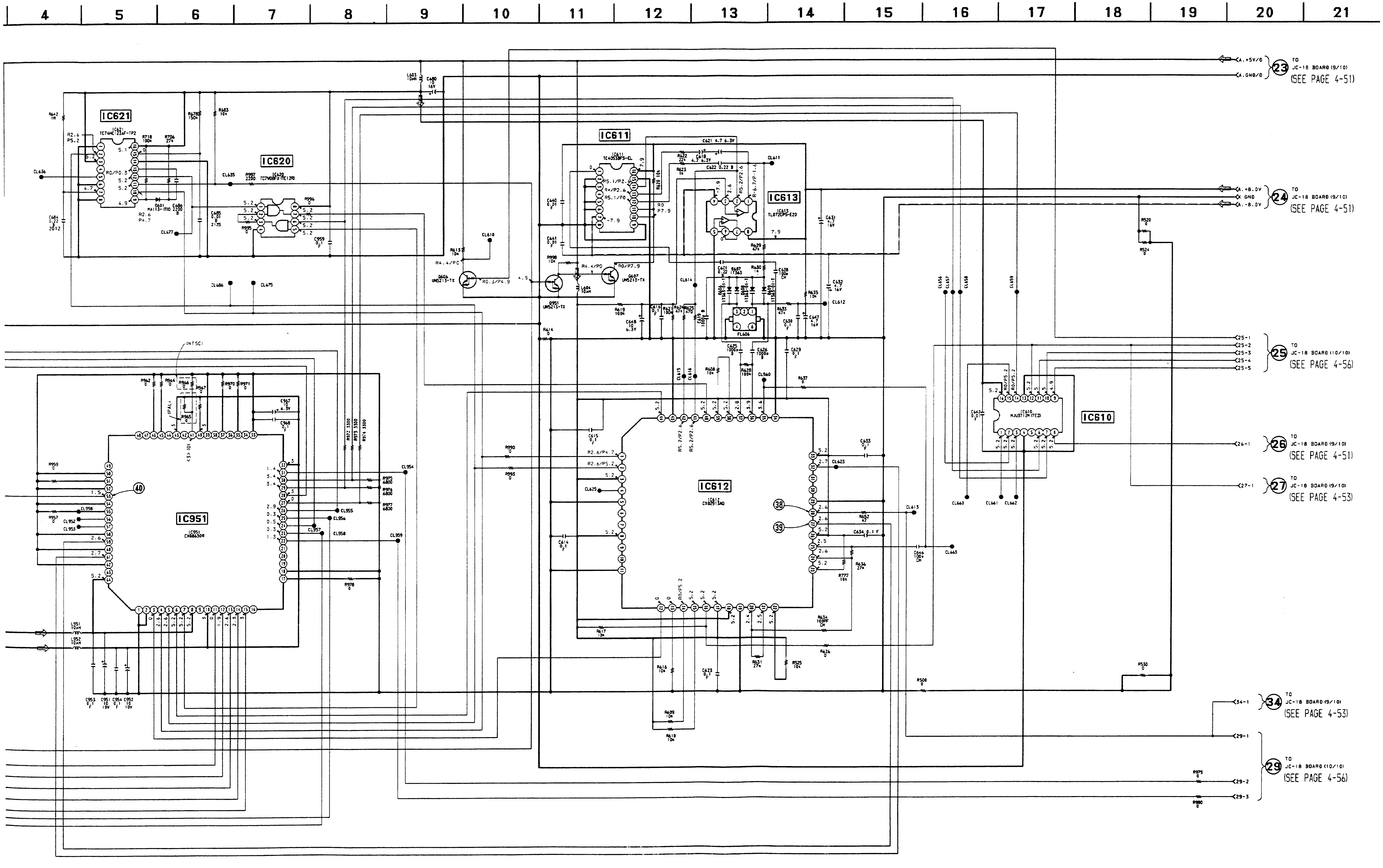
I
J
K
JC-18 BOARD (8/10)
(DIGITAL AUDIO BLOCK)
no mark : REC/PB mode
( ) : (NTSC)
< > : (PAL)
R : REC mode
P : PB mode
IC621
IC621 TC74HC125AF-TP2
R718 100k
R706 27k
R678 150k
R642 1M
CL636
C684 0.22 2012
C686 2200
C685 0.01
CL677
TO JC-18 BOARD (7/10) (SEE PAGE 4-45)
21
GND
TO JC-18 BOARD (10/10) (SEE PAGE 4-56)
22
22-1
22-2
22-3
(NTSC)
(PAL)
R962
R964
R966
R965
R967
R959
R957
CL951
CL996
CL952
CL953
40
IC951
IC951 CXD8630R
16-4
L951 10uH
L952 10uH
J3.1V
TO JC-18 BOARD (5/10) (SEE PAGE 4-39)
16
C953 0.1
C951 10 10V
C954 0.1
C952 10 10V
R951 0
R952 0
R953 0
R954 0
R955 0
R956 0
CL945
CL946
CL947
CL948
CL949
CL970
16-6
16-5
16-3
16-1
16-2
16-9
16-8
16-7
09

• Refer to page 4–15 for Printed Wiring Board.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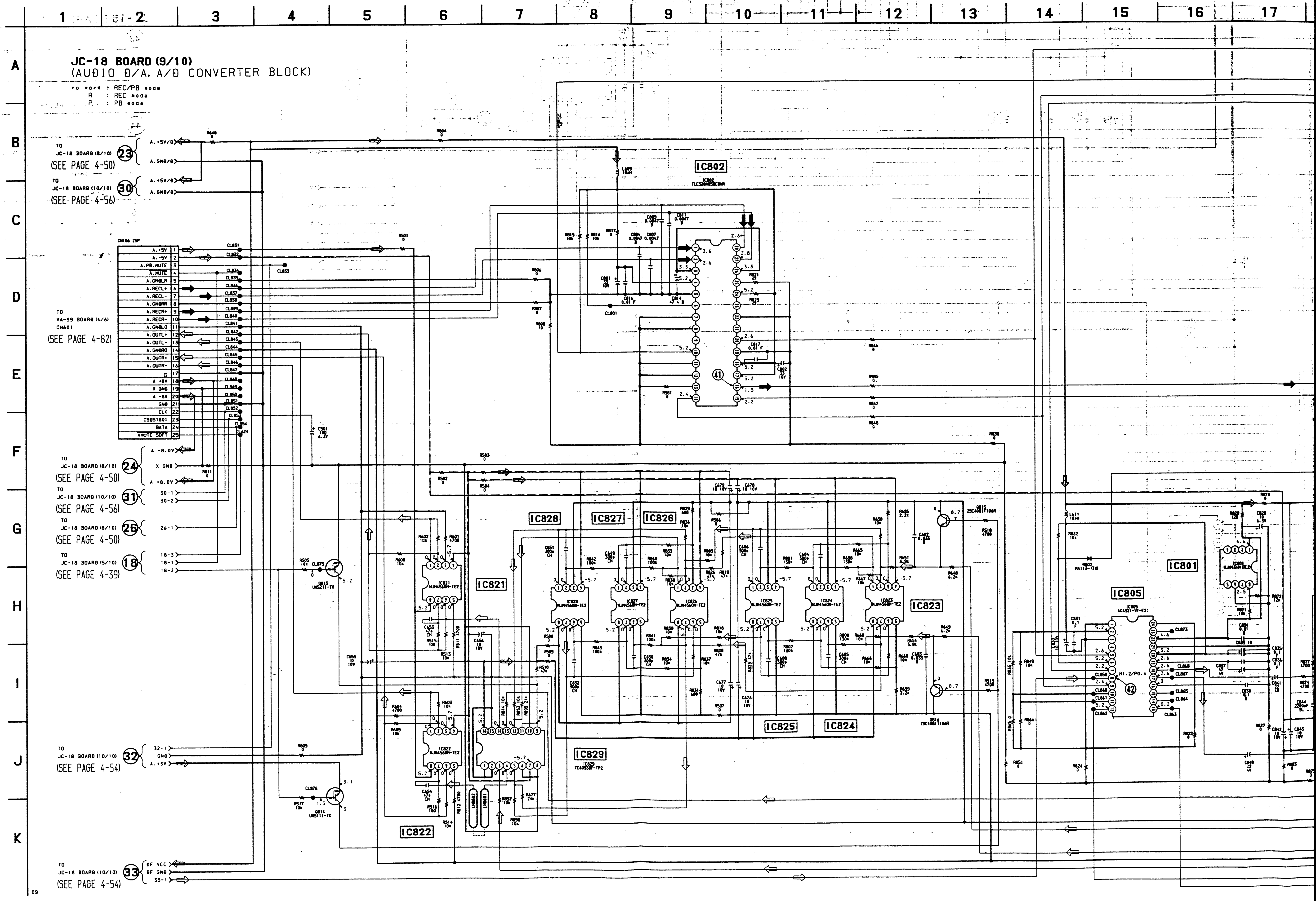
13
14
15
16
17
18
19
20
21
IC621
TC74HC123AF-TP2
IC620
TC7W08FU (TE12R)
IC611
TC4053BFS-EL
IC613
TL072CPS-E20
IC612
CXA2913AQ
IC951
CX86630R
IC610
NJU3712M (TE2)
Q606
UN5215-TX
Q951
UN5213-TX
Q607
UN5213-TX
FL606
(NTSC)
(PAL)
40
38
39
A.+5V/0
A.GND/0
23
TO
JC-18 BOARD (9/10)
(SEE PAGE 4-51)
A.+8.0V
GND
A.-8.0V
24
TO
JC-18 BOARD (9/10)
(SEE PAGE 4-51)
25-1
25-2
25-3
25-4
25-5
25
TO
JC-18 BOARD (10/10)
(SEE PAGE 4-56)
26-1
26
TO
JC-18 BOARD (9/10)
(SEE PAGE 4-51)
27-1
27
TO
JC-18 BOARD (9/10)
(SEE PAGE 4-53)
34-1
34
TO
JC-18 BOARD (9/10)
(SEE PAGE 4-53)
29-1
29-2
29-3
R979
0
R980
0
29
TO
JC-18 BOARD (10/10)
(SEE PAGE 4-56)

JC-18 (AUDIO D/A, A/D CONVERTER) SCHEMATIC DIAGRAM

– Ref No. JC-18 BOARD: 2,000 series –

• Refer to page 4–15 for Printed Wiring Board.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14
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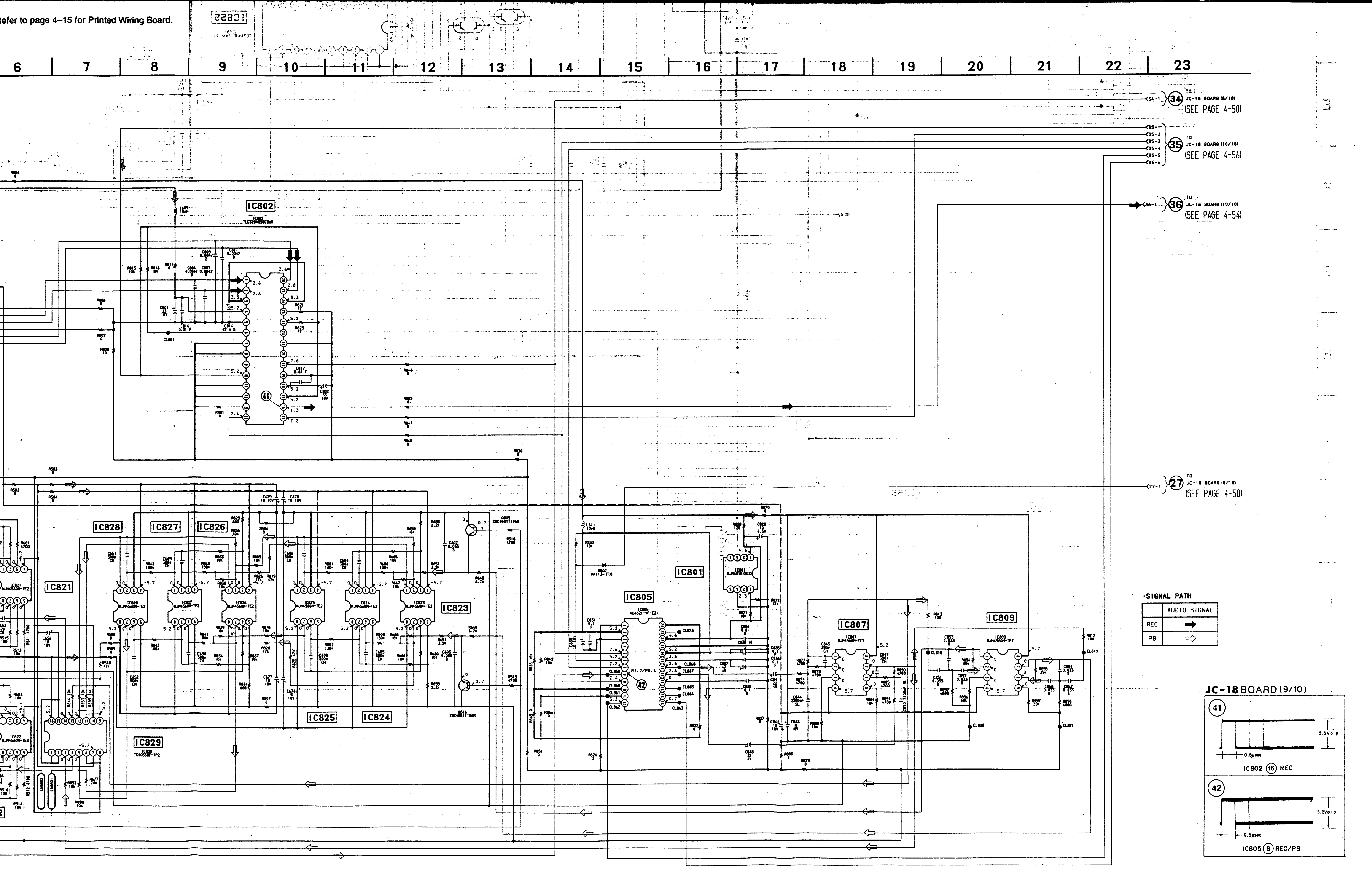
16
17
A
B
C
D
E
F
G
H
I
J
K
JC-18 BOARD (9/10)
(AUDIO D/A, A/D CONVERTER BLOCK)
no mark : REC/PB mode
R : REC mode
P : PB mode
TO JC-18 BOARD (8/10) 23 (SEE PAGE 4-50)
A.+5V/D
A.GND/D
TO JC-18 BOARD (10/10) 30 (SEE PAGE 4-56)
A.+5V/D
A.GND/D
CN106 25P
1 A.+5V
2 A.-5V
3 A.PB.MUTE
4 A.MUTE
5 A.GNDLR
6 A.RECL+
7 A.RECL-
8 A.GNDRR
9 A.RECR+
10 A.RECR-
11 A.GNDLO
12 A.OUTL+
13 A.OUTL-
14 A.GNDRO
15 A.OUTR+
16 A.OUTR-
17 G
18 A +8V
19 X GND
20 A -8V
21 GND
22 CLK
23 CSDS1801
24 DATA
25 AMUTE SOFT
TO VA-99 BOARD (4/6) CN601 (SEE PAGE 4-82)
TO JC-18 BOARD (8/10) 24 (SEE PAGE 4-50)
A -8.0V
X GND
A +8.0V
TO JC-18 BOARD (10/10) 31 (SEE PAGE 4-56)
30-1
30-2
TO JC-18 BOARD (8/10) 26 (SEE PAGE 4-50)
26-1
TO JC-18 BOARD (5/10) 18 (SEE PAGE 4-39)
18-3
18-1
18-2
TO JC-18 BOARD (10/10) 32 (SEE PAGE 4-54)
32-1
GND
A.+3V
TO JC-18 BOARD (10/10) 33 (SEE PAGE 4-54)
DF VCC
DF GND
33-1
C501 100 6.3V
Q813 UN5211-TX
Q814 UN5111-TX
IC802
IC802 TLC320AD58CDWR
41
IC821
IC822
IC823
IC824
IC825
IC826
IC827
IC828
IC829
IC829 TC4053BF-TP2
IC805
IC805 AK4321-VF-E2
42
IC801
IC801 NJM4631M(TE2)
D802 MA113-(TX)
09

efer to page 4–15 for Printed Wiring Board.

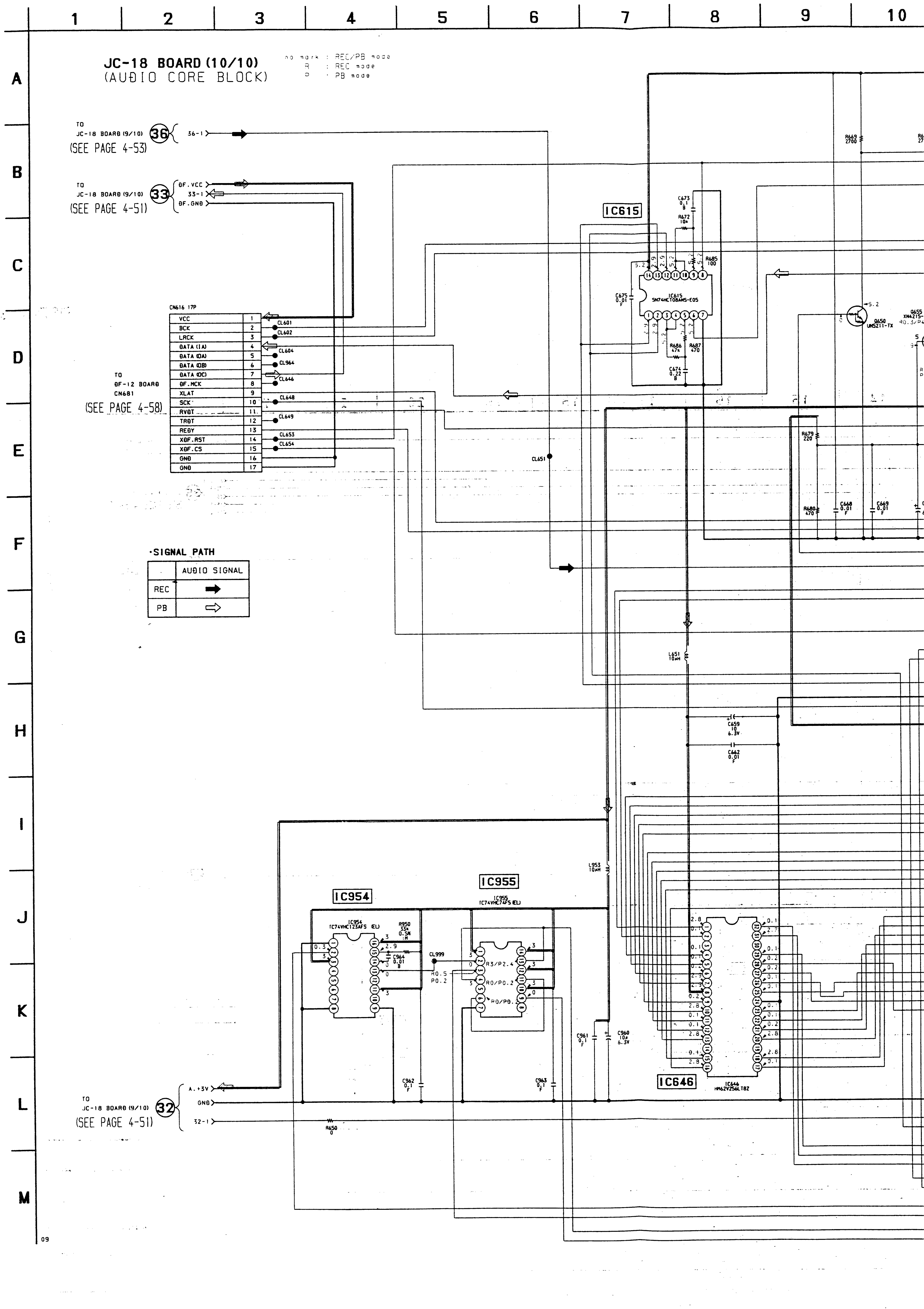

6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
IC802
TLC32640DBCBNR
IC805
AK4321-VF-E2
IC801
IC807
IC809
IC821
IC822
IC823
IC824
IC825
IC826
IC827
IC828
IC829
TC4053BF-TP2
NJM4560M-TE2
41
42
TO JC-18 BOARD (8/10) (SEE PAGE 4-50)
34
TO JC-18 BOARD (10/10) (SEE PAGE 4-56)
35
TO JC-18 BOARD (10/10) (SEE PAGE 4-54)
36
TO JC-18 BOARD (8/10) (SEE PAGE 4-50)
27
2SC4081T106R
MA115-(TX)
-SIGNAL PATH
AUDIO SIGNAL
REC ➡
PB ⇨
JC-18 BOARD (9/10)
5.5Vp-p
0.5μsec
IC802 ⑯ REC
5.2Vp-p
IC805 ⑧ REC/PB

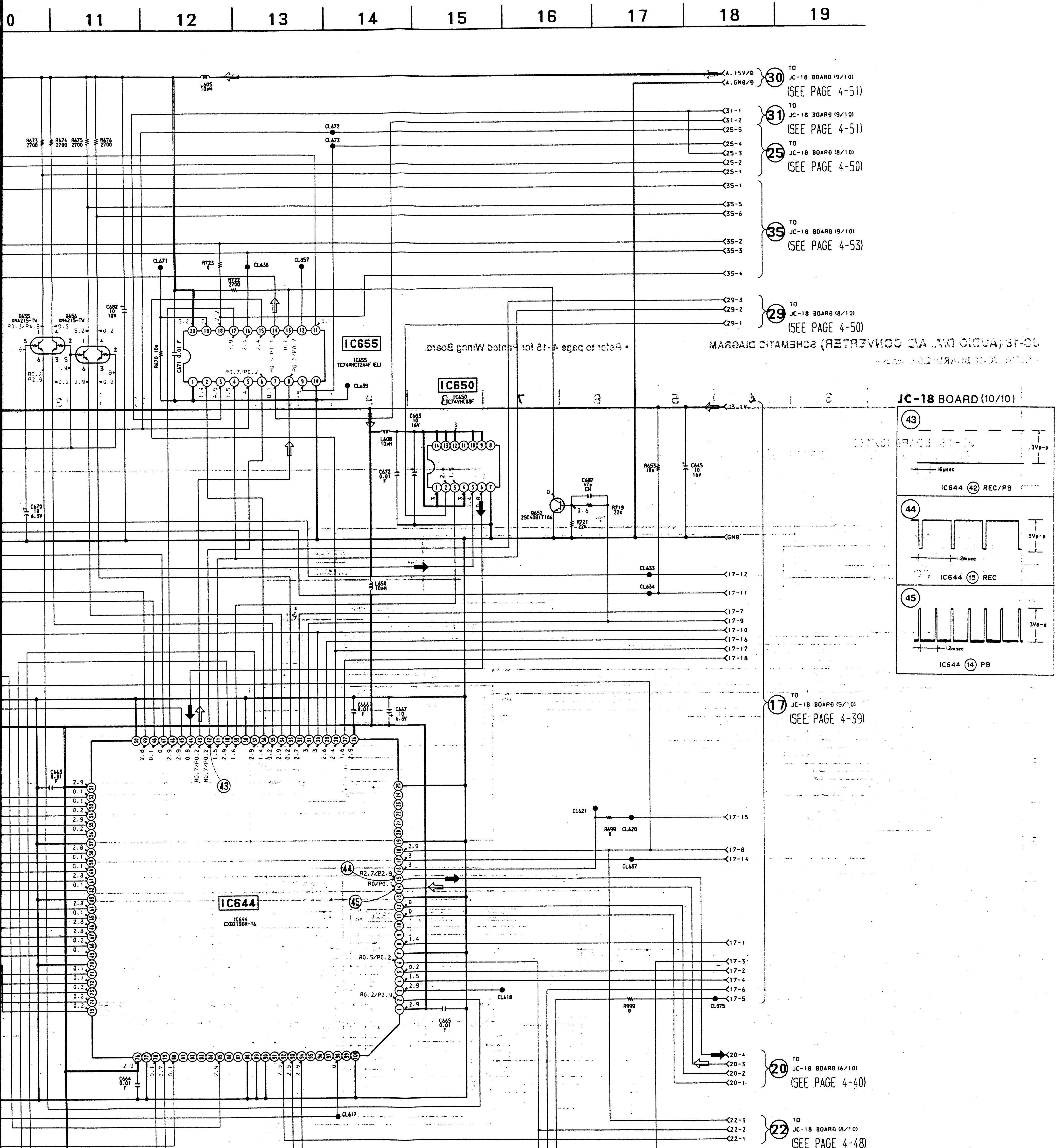
AUDIO, D/A, A/D CONVERTER
JC-18 (9/10)

JC-18 (AUDIO CORE) SCHEMATIC DIAGRAM

– Ref No. JC-18 BOARD: 2,000 series –

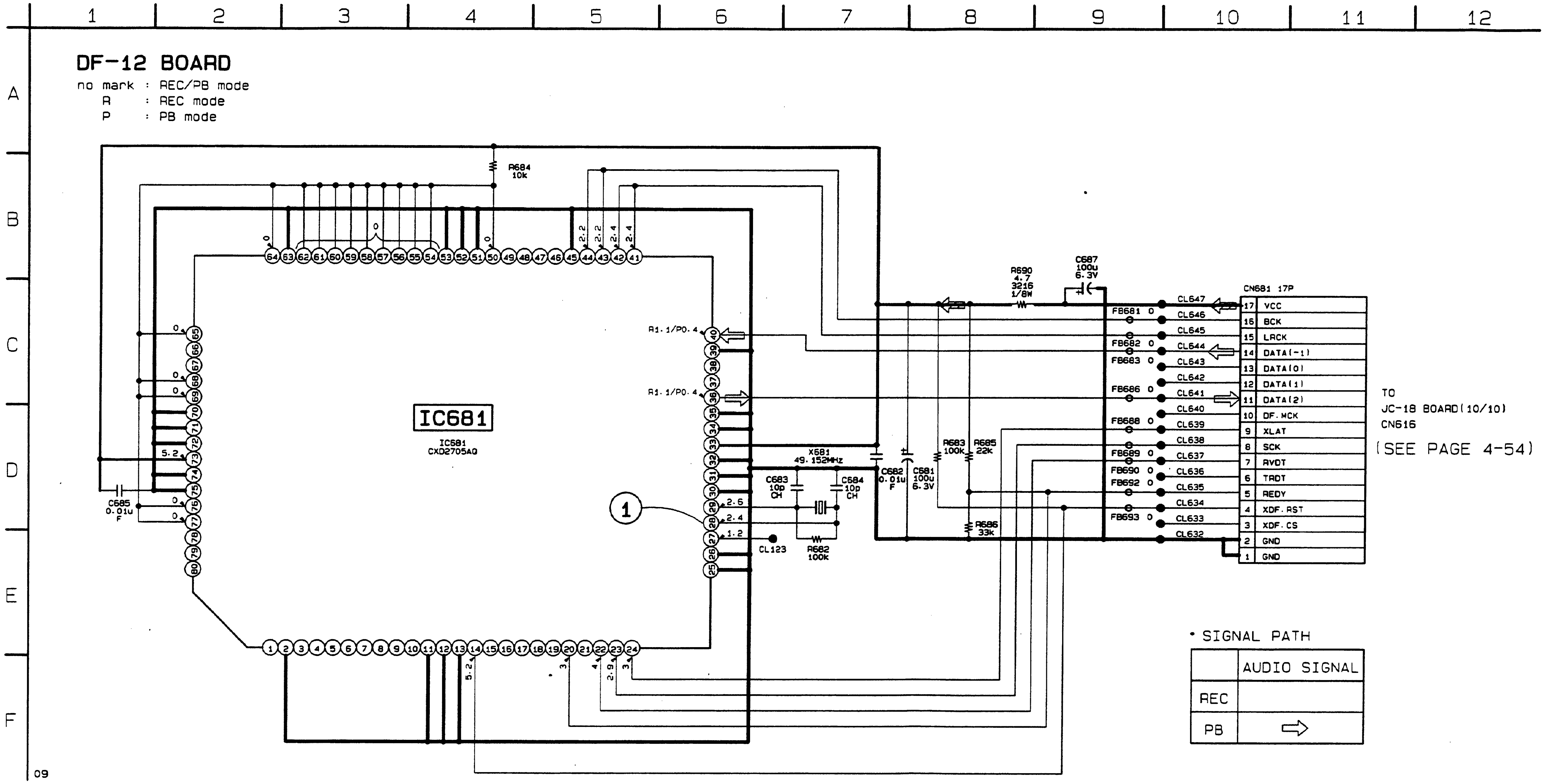
• Refer to page 4–15 for Printed Wiring Board.


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L
M
JC-18 BOARD (10/10)
(AUDIO CORE BLOCK)
no mark : REC/PB mode
R : REC mode
P : PB mode
TO
JC-18 BOARD (9/10)
36
36-1
(SEE PAGE 4-53)
TO
JC-18 BOARD (9/10)
33
DF.VCC
33-1
DF.GND
(SEE PAGE 4-51)
CN616 17P
VCC 1
BCK 2
LRCK 3
DATA (IA) 4
DATA (OA) 5
DATA (OB) 6
DATA (OC) 7
DF.MCK 8
XLAT 9
SCK 10
RVDT 11
TRDT 12
REDY 13
XDF.RST 14
XDF.CS 15
GND 16
GND 17
CL601
CL602
CL604
CL964
CL646
CL648
CL649
CL653
CL654
TO
DF-12 BOARD
CN681
(SEE PAGE 4-58)
CL651
·SIGNAL PATH
AUDIO SIGNAL
REC
PB
IC615
C673 0.1 B
R672 10k
R685 100
C675 0.01 F
IC615 SN74HCT08ANS-E05
R686 47k
R687 470
C674 0.22 B
5.2
2.9
R669 2700
Q650 UN5211-TX
Q655 XN4215-
R0.3/P4
R679 220
R680 470
C668 0.01 F
C669 0.01 F
L651 10μH
C659 10 6.3V
C662 0.01 F
L953 10μH
IC954
IC954 TC74VHC123AFS (EL)
R950 33k 0.5%
C964 0.01 B
CL999
R0.5
P0.2
IC955
IC955 TC74VHC74FS (EL)
R3/P2.4
R0/P0.2
C961 0.1 F
C960 10μ 6.3V
C962 0.1 F
C963 0.1 F
IC646
IC646 HM62V256LT8Z
TO
JC-18 BOARD (9/10)
32
A.+3V
GND
32-1
(SEE PAGE 4-51)
R650 0
09


10
11
12
13
14
15
16
17
18
19
L605 10μH
A.+5V/0
A.GND/0
30 TO JC-18 BOARD (9/10) (SEE PAGE 4-51)
31-1
31-2
25-5
25-4
25-3
25-2
25-1
31 TO JC-18 BOARD (9/10) (SEE PAGE 4-51)
25 TO JC-18 BOARD (8/10) (SEE PAGE 4-50)
35-1
35-5
35-6
35-2
35-3
35-4
35 TO JC-18 BOARD (9/10) (SEE PAGE 4-53)
29-3
29-2
29-1
29 TO JC-18 BOARD (8/10) (SEE PAGE 4-50)
CL672
CL673
R673 2700
R674 2700
R675 2700
R676 2700
CL671
R723 0
CL638
CL857
R722 2700
Q655 XN4215-TW
Q656 XN4215-TW
C682 10 10V
R670 10k
C671 0.01 F
IC655
IC655 TC74VHCT244F (EL)
CL639
IC650
IC650 TC74VHC08F
C683 10 16V
L608 10μH
C672 0.01 F
R653 10k
C645 10 16V
C687 47p CH
Q652 2SC4081T106
R721 22k
R719 22k
13.1V
GND
C670 10 6.3V
CL633
CL634
17-12
17-11
L650 10μH
17-7
17-9
17-10
17-16
17-17
17-18
C666 0.01 F
C667 10 6.3V
17 TO JC-18 BOARD (5/10) (SEE PAGE 4-39)
C663 0.01 F
IC644
IC644 CXD2190R-T6
43
44
45
R0.7/P0.2
R2.7/Z2.9
R0/P0.1
R0.5/P0.2
R0.2/P2.9
CL621
R699 0
CL620
CL637
17-15
17-8
17-14
17-1
17-3
17-2
17-4
17-6
17-5
CL618
R999 0
CL975
C665 0.01 F
C664 0.01 F
CL617
20-4
20-3
20-2
20-1
20 TO JC-18 BOARD (6/10) (SEE PAGE 4-40)
22-3
22-2
22-1
22 TO JC-18 BOARD (8/10) (SEE PAGE 4-48)
R644 10k
R645 10k
R646 10k
R647 10k
JC-18 BOARD (10/10)
43
3Vp-p
16μsec
IC644 42 REC/PB
44
3Vp-p
1.2msec
IC644 15 REC
45
3Vp-p
1.2msec
IC644 14 PB

DF-12 (DIGITAL FILTER) SCHEMATIC DIAGRAM

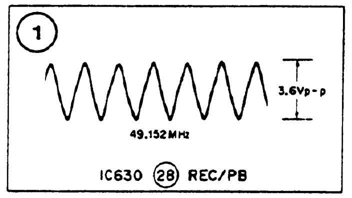
– Ref No. DF-12 BOARD: 1,000 series –

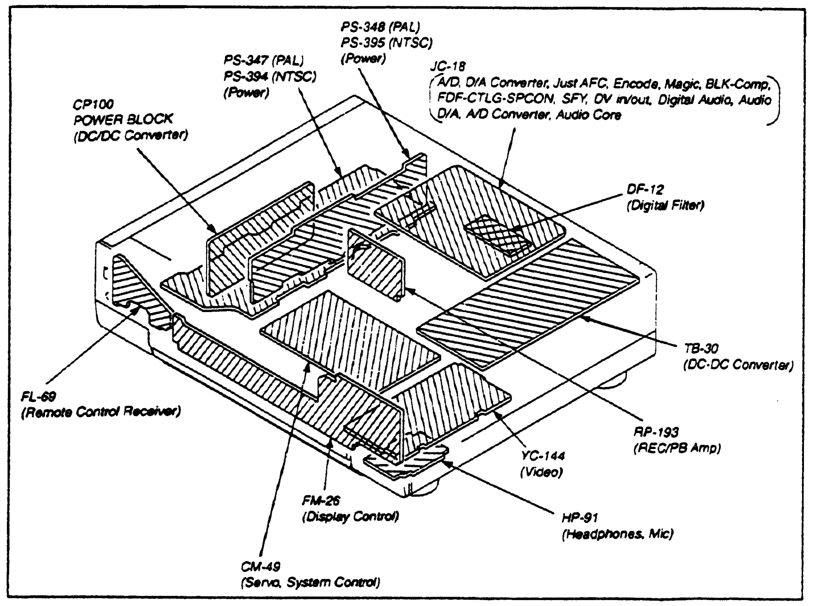

1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
DF-12 BOARD
no mark : REC/PB mode
R : REC mode
P : PB mode
R684
10k
IC681
IC681
CXD2705AQ
R1.1/P0.4
R1.1/P0.4
2.2
2.2
2.4
2.4
5.2
2.6
2.4
1.2
5.2
3
4
2.9
3
C685
0.01u
F
X681
49.152MHz
C683
10p
CH
C684
10p
CH
CL123
R682
100k
C682
0.01u
F
C681
100u
6.3V
R683
100k
R685
22k
R686
33k
R690
4.7
3216
1/8W
C687
100u
6.3V
FB681
FB682
FB683
FB686
FB688
FB689
FB690
FB692
FB693
CL647
CL646
CL645
CL644
CL643
CL642
CL641
CL640
CL639
CL638
CL637
CL636
CL635
CL634
CL633
CL632
CN681 17P
17 VCC
16 BCK
15 LRCK
14 DATA(-1)
13 DATA(0)
12 DATA(1)
11 DATA(2)
10 DF.MCK
9 XLAT
8 SCK
7 RVDT
6 TRDT
5 REDY
4 XDF.RST
3 XDF.CS
2 GND
1 GND
TO
JC-18 BOARD(10/10)
CN616
(SEE PAGE 4-54)
09

• SIGNAL PATH

	AUDIO SIGNAL
REC	
PB	⇨

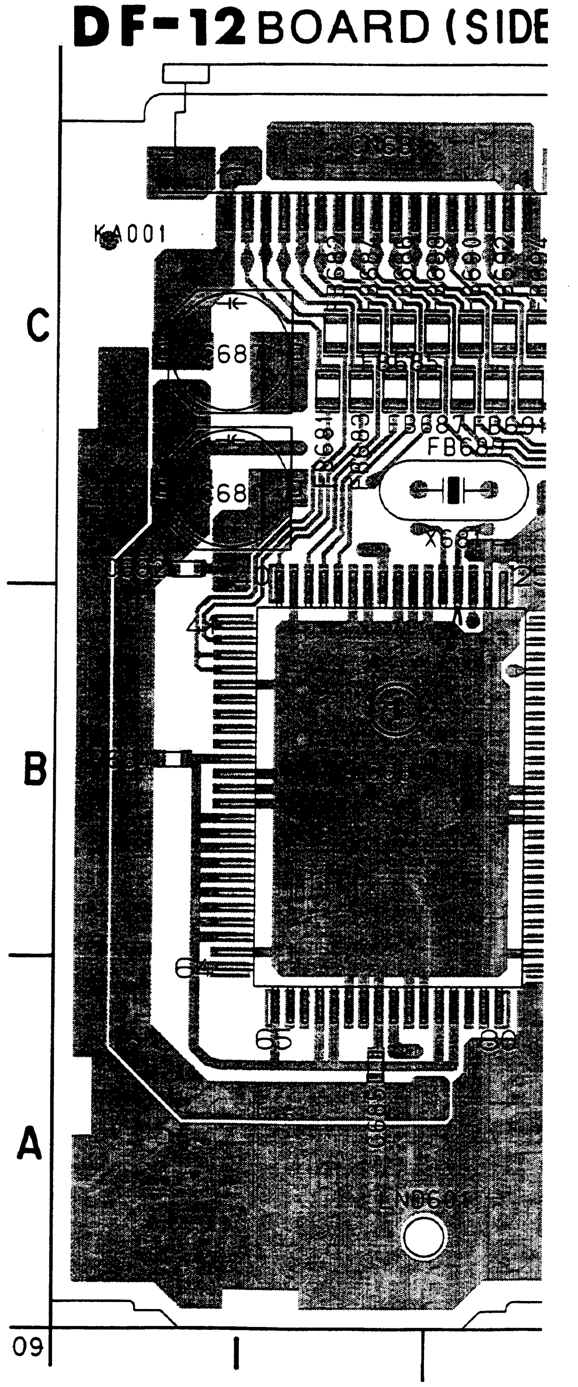
DF-12 BOARD

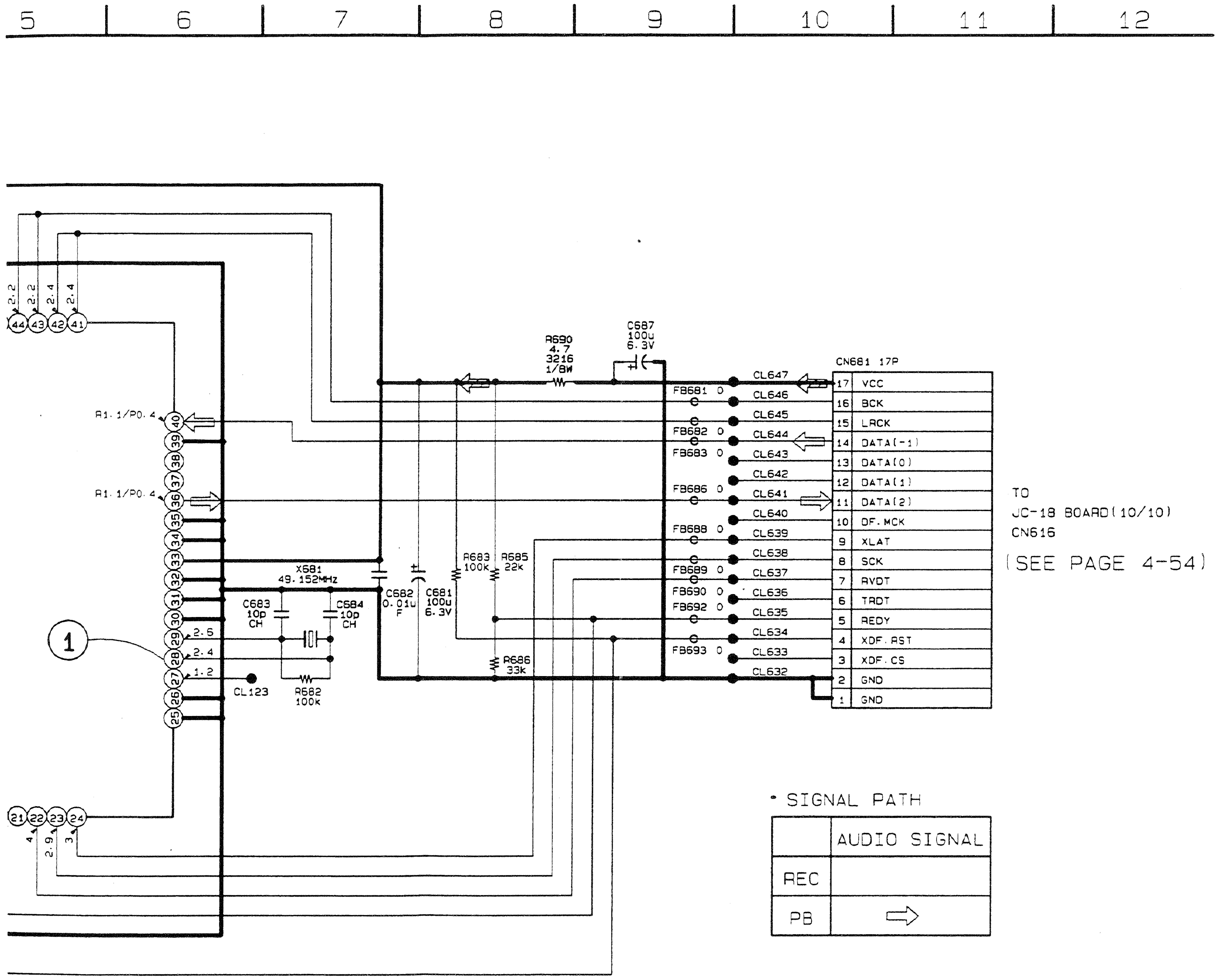



PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
(A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core)
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

DF-12 (DIGITAL FILTER) PRINTED WIRING BO

– Ref No. DF-12 BOARD: 1,000 series –

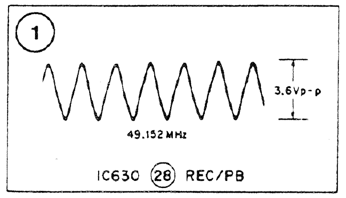

DF-12 BOARD (SIDE
KA001
C
B
A
09

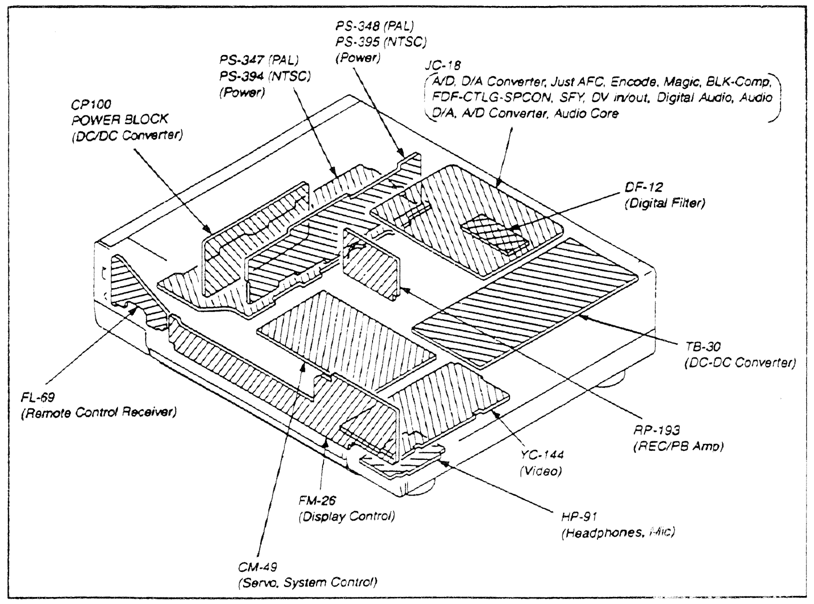

5
6
7
8
9
10
11
12
2.2
2.2
2.4
2.4
44 43 42 41
R1.1/P0.4
40 39 38 37
R1.1/P0.4
36 35 34 33 32 31 30 29 28 27 26 25
2.6
2.4
1.2
1
X681
49.152MHz
C683
10p
CH
C684
10p
CH
CL123
R682
100k
C682
0.01u
F
C681
100u
6.3V
R683
100k
R685
22k
R686
33k
R690
4.7
3216
1/8W
C687
100u
6.3V
21 22 23 24
4
2.9
3
FB681 0
FB682 0
FB683 0
FB686 0
FB688 0
FB689 0
FB690 0
FB692 0
FB693 0
CL647
CL646
CL645
CL644
CL643
CL642
CL641
CL640
CL639
CL638
CL637
CL636
CL635
CL634
CL633
CL632
CN681 17P
17 VCC
16 BCK
15 LRCK
14 DATA(-1)
13 DATA(0)
12 DATA(1)
11 DATA(2)
10 DF.MCK
9 XLAT
8 SCK
7 RVDT
6 TRDT
5 REDY
4 XDF.RST
3 XDF.CS
2 GND
1 GND
TO
JC-18 BOARD(10/10)
CN616
(SEE PAGE 4-54)

• SIGNAL PATH

	AUDIO SIGNAL
REC	
PB	⇨

DF-12 BOARD



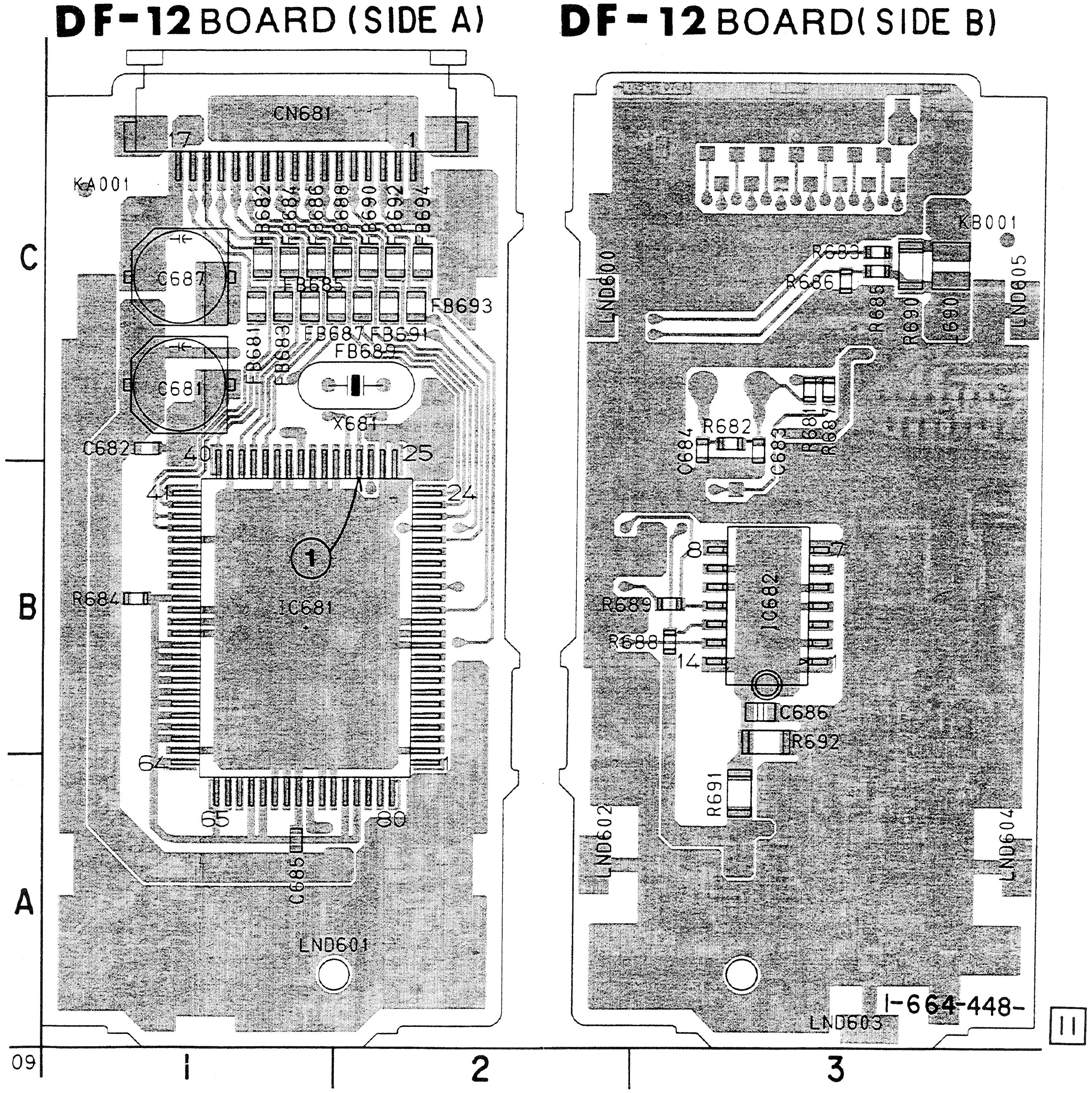

PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
(A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core)
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

• **For Printed Wiring Boards.**

There are few cases that the part isn't mounted in this model is printed on this diagram.

DF-12 (DIGITAL FILTER) PRINTED WIRING BOARD

– Ref No. DF-12 BOARD: 1,000 series –


DF-12 BOARD (SIDE A)
DF-12 BOARD (SIDE B)
CN681
17
1
KA001
FB682
FB684
FB686
FB688
FB690
FB692
FB694
C687
FB685
FB693
FB681
FB683
FB687
FB691
FB689
C681
X681
C682
40
25
41
24
1
IC681
R684
64
65
80
C685
LND601
KB001
R683
R686
R685
R690
C690
LND600
LND605
R682
C684
C683
R681
R687
8
7
R689
R688
14
IC682
C686
R692
R691
LND602
LND604
LND603
1-664-448-
11
C
B
A
09
1
2
3

VA-99 (YC PROCESSOR, SYSTEM CONTROL, AUDIO, LINE IN/OUT, MODE CONTROL) PRINTED WIRING BOARD

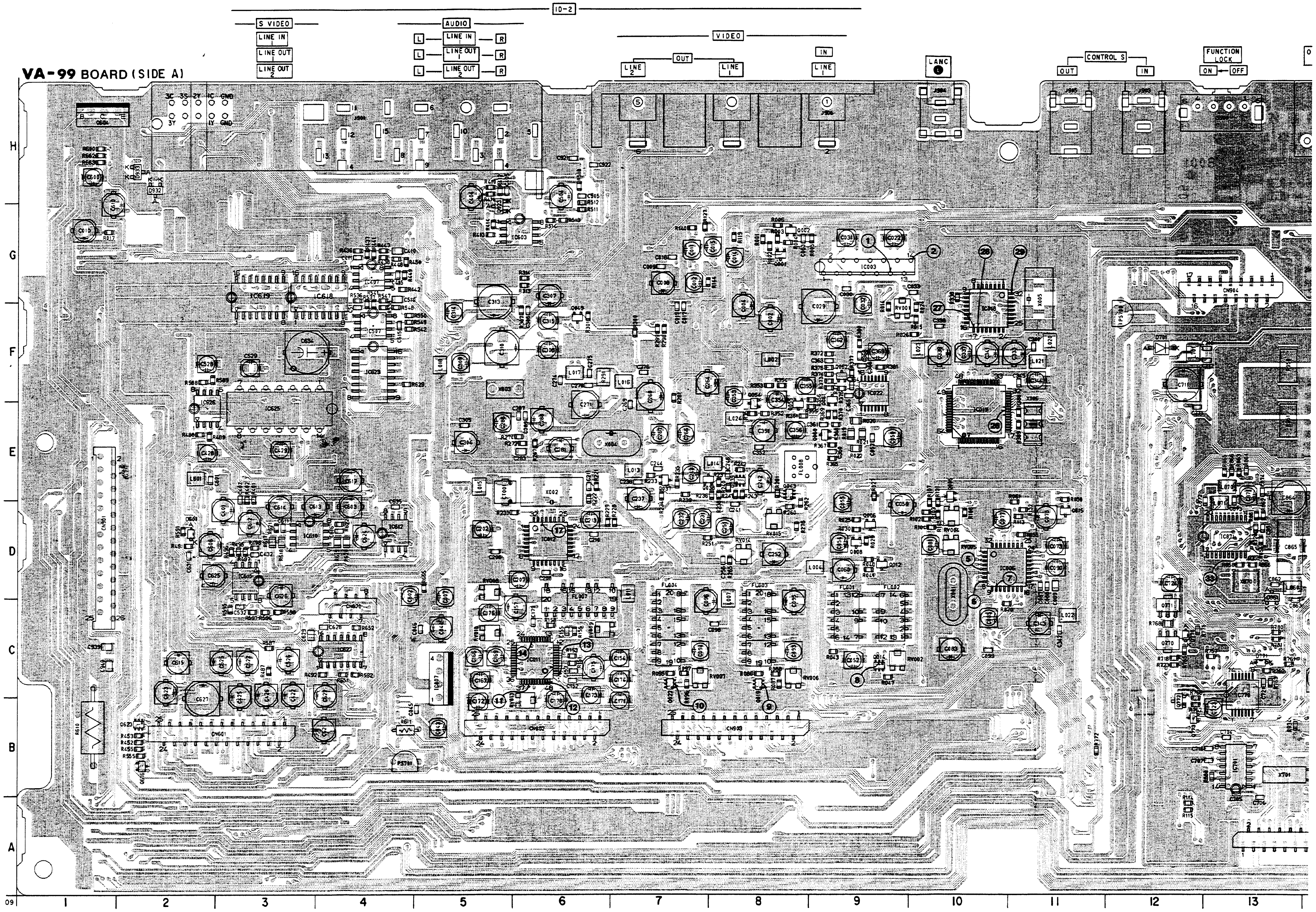
– Ref No. VA-99 BOARD: 3,000 series –

There are few cases that the part isn't mounted in this model is printed on this diagram.

- **For Printed Wiring Boards**
- This board is six-layer print
layers 2 to 5 have not been

VA-99 BOARD

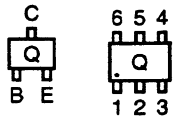
CN002	B-6
CN003	A-20
CN601	B-3
CN604	A-18
CN701	A-14
CN702	A-29
CN870	C-4
CN901	D-1
CN903	B-8
CN904	G-13
CN905	G-31
D002	E-27
D601	D-2
D603	C-30
D604	B-30
D610	A-23
D700	F-21
D701	F-12
D720	B-15
D770	C-12
D771	C-13
D861	D-13
D901	H-24
D902	H-31
D903	H-30
D904	H-25
D905	H-30
D906	H-30
D907	H-26
D908	H-30
D909	H-30
D911	H-27
D912	H-27
D913	H-27
D914	H-28
D915	H-26
D916	H-26
D917	H-28
D918	H-26
D919	H-17
D920	H-19
D921	H-17
D922	H-23
D923	G-5
D924	H-21
D925	H-26
D926	H-20
D930	H-30
D932	H-2
D933	H-2
IC001	G-25
IC003	G-9
IC006	D-10
IC007	C-5
IC011	C-6
IC012	D-6
IC013	E-25
IC014	E-25
IC015	F-26
IC016	E-27
IC017	F-27
IC018	F-10
IC019	E-10
IC021	C-22
IC401	C-30
IC407	G-4
IC501	C-30
IC507	F-4
IC602	D-29
IC603	G-6
IC607	D-30
IC609	H-31
IC610	D-3
IC611	A-23
IC612	D-4
IC613	D-30
IC615	D-3
IC616	B-29
IC618	G-3
IC619	G-3
IC623	F-4
IC624	B-30
IC625	E-3
IC626	E-2
IC627	C-4
IC701	B-13
IC702	B-15
IC703	B-17
IC770	C-13
IC775	D-20
IC776	C-20
IC777	C-20
IC778	E-19
IC779	F-20
IC780	E-20
IC781	C-19
IC782	A-17
IC801	D-15
IC871	D-13
Q001	G-8
Q002	G-8
Q003	G-24
Q004	G-24
Q006	D-9
Q007	C-22
Q008	D-9
Q010	D-23
Q012	D-9
Q013	C-23
Q014	C-9
Q015	D-11
Q016	D-22
Q017	D-24
Q018	C-24
Q019	C-8
Q020	D-25
Q021	C-25
Q022	C-7
Q025	G-24
Q031	B-27
Q033	C-26
Q035	C-26
Q037	E-7
Q038	E-7
Q039	E-8
Q040	D-25
Q041	D-25
Q042	D-24
Q043	E-8
Q047	F-25
Q048	F-25
Q049	F-6
Q050	F-28
Q051	F-27
Q052	F-28
Q054	E-8
Q055	E-8
Q056	F-24
Q057	E-24
Q058	E-24
Q059	E-24
Q060	E-9
Q061	F-9
Q062	F-9
Q063	F-23
Q064	F-23
Q065	F-23
Q066	F-22
Q067	D-24
Q068	D-24
Q071	E-25
Q402	C-29
Q403	C-29
Q404	C-30
Q430	C-29
Q502	C-29
Q503	C-29
Q504	C-30
Q530	C-29
Q600	H-31
Q604	H-1
Q605	D-29
Q606	D-29
Q608	E-31
Q610	D-28
Q611	D-28
Q612	E-30
Q613	D-28
Q614	B-30
Q615	B-31
Q616	B-2
Q617	B-31
Q618	D-30
Q619	D-30
Q620	B-30
Q621	B-30
Q623	B-2
Q624	B-31
Q701	B-15
Q750	C-20
Q751	C-19
Q770	C-12
Q771	C-12
Q772	B-12
Q773	B-12
Q774	B-20
Q870	E-19
Q871	E-19
Q872	E-20
Q873	E-20



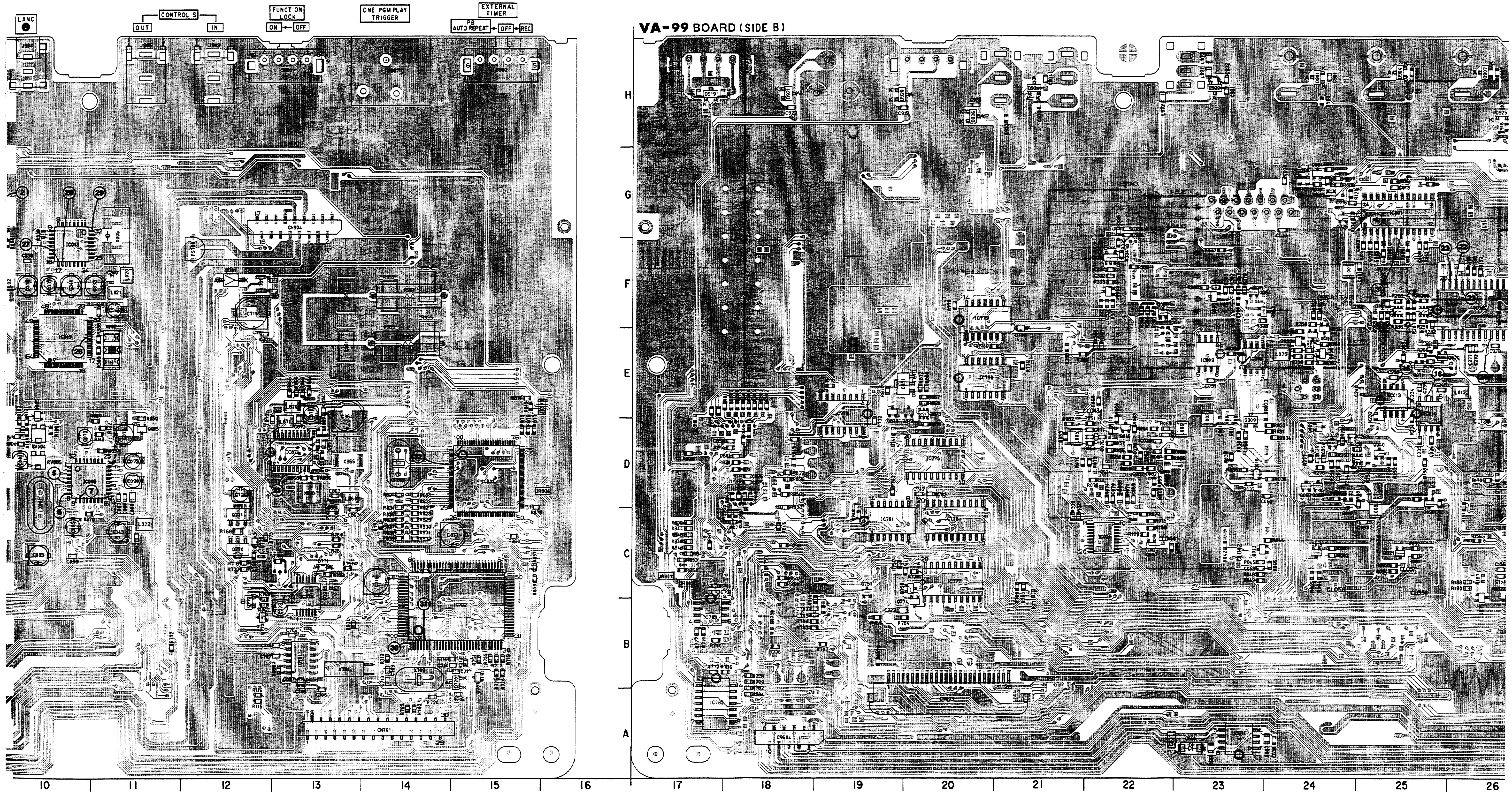
ne part isn't mounted in this model is

- **For Printed Wiring Boards.**
- This board is six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.

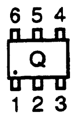
- Chip transistor


C
Q
B E
6 5 4
Q
1 2 3

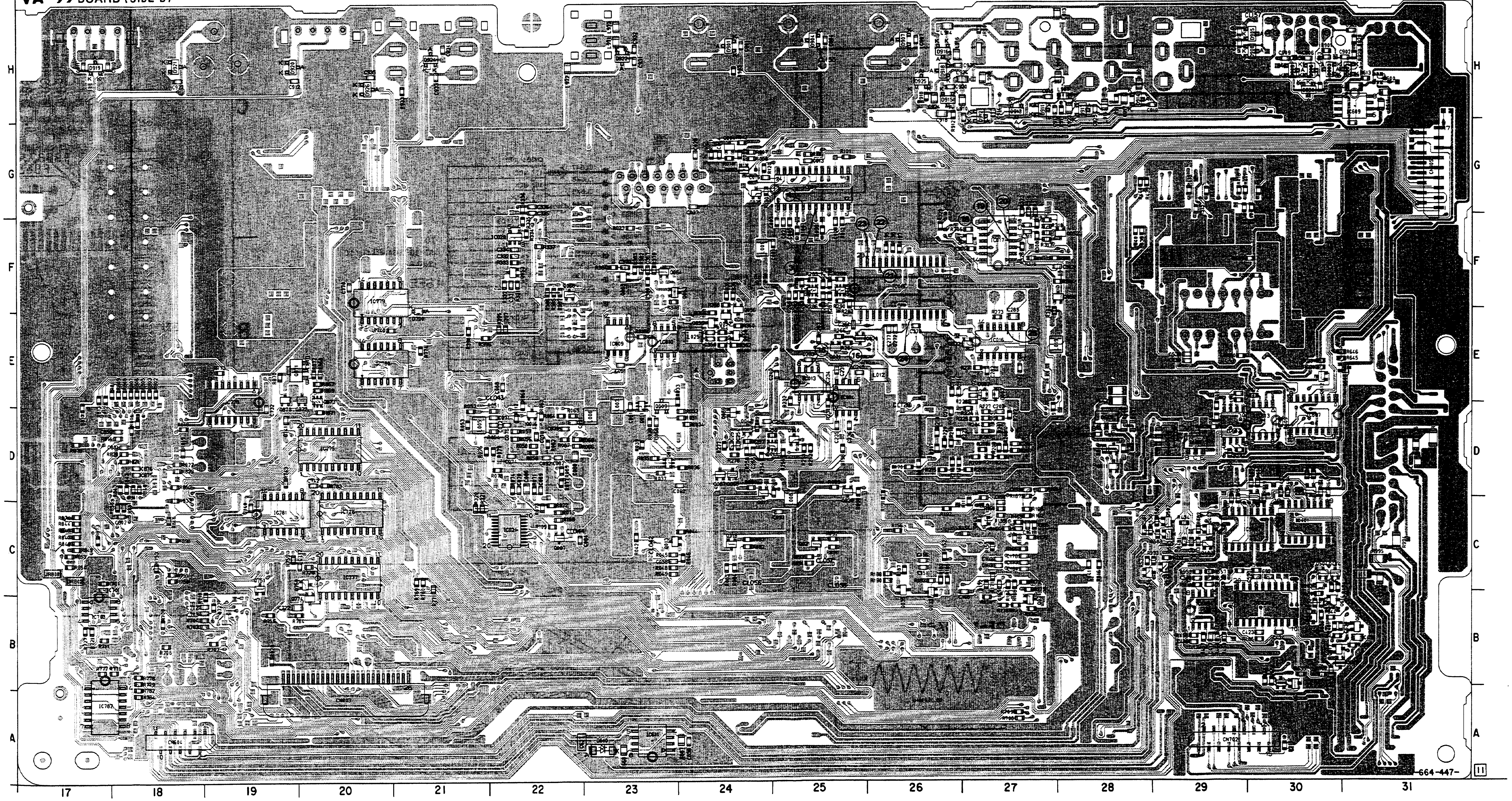
VA-99 BOARD (SIDE B)


LANC
CONTROL S
OUT
IN
FUNCTION LOCK
ON
OFF
ONE PGM PLAY TRIGGER
EXTERNAL TIMER
PB
AUTO REPEAT
OFF
REC
H
G
F
E
D
C
B
A
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

ansistor

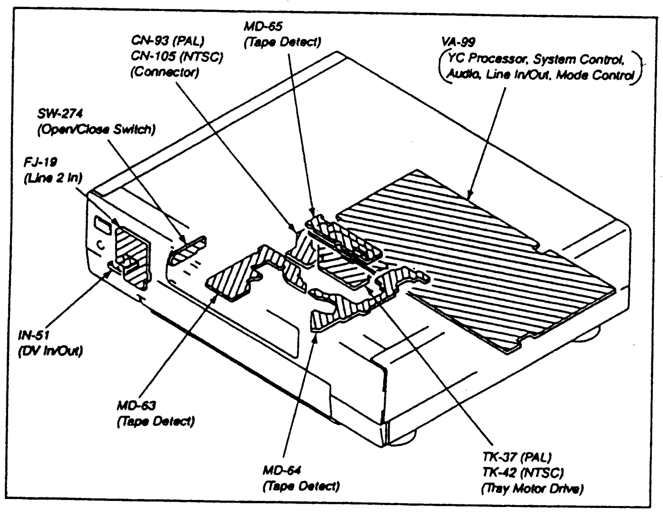


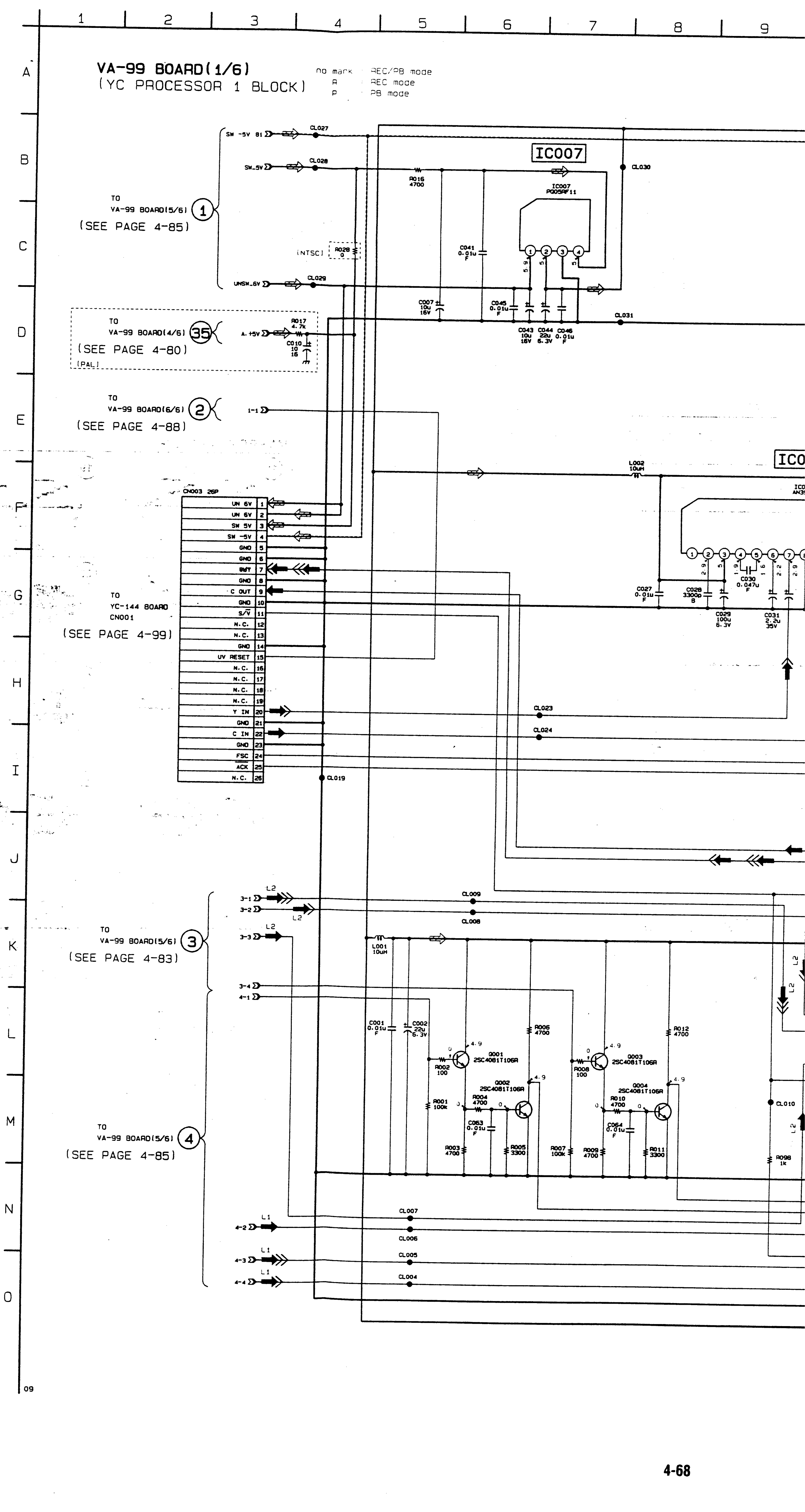
VA-99 BOARD (SIDE B)

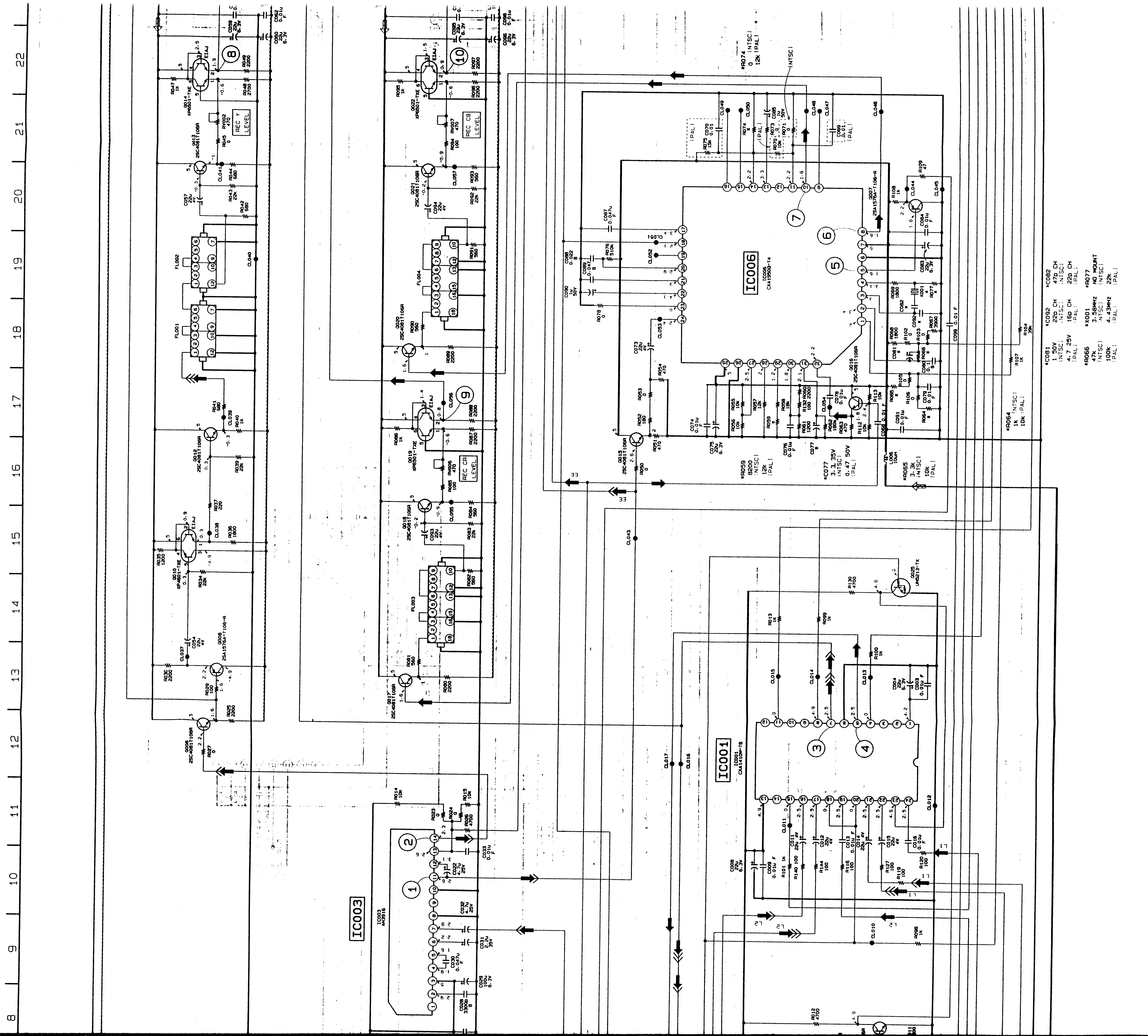

H
G
F
E
D
C
B
A
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
664-447-
11

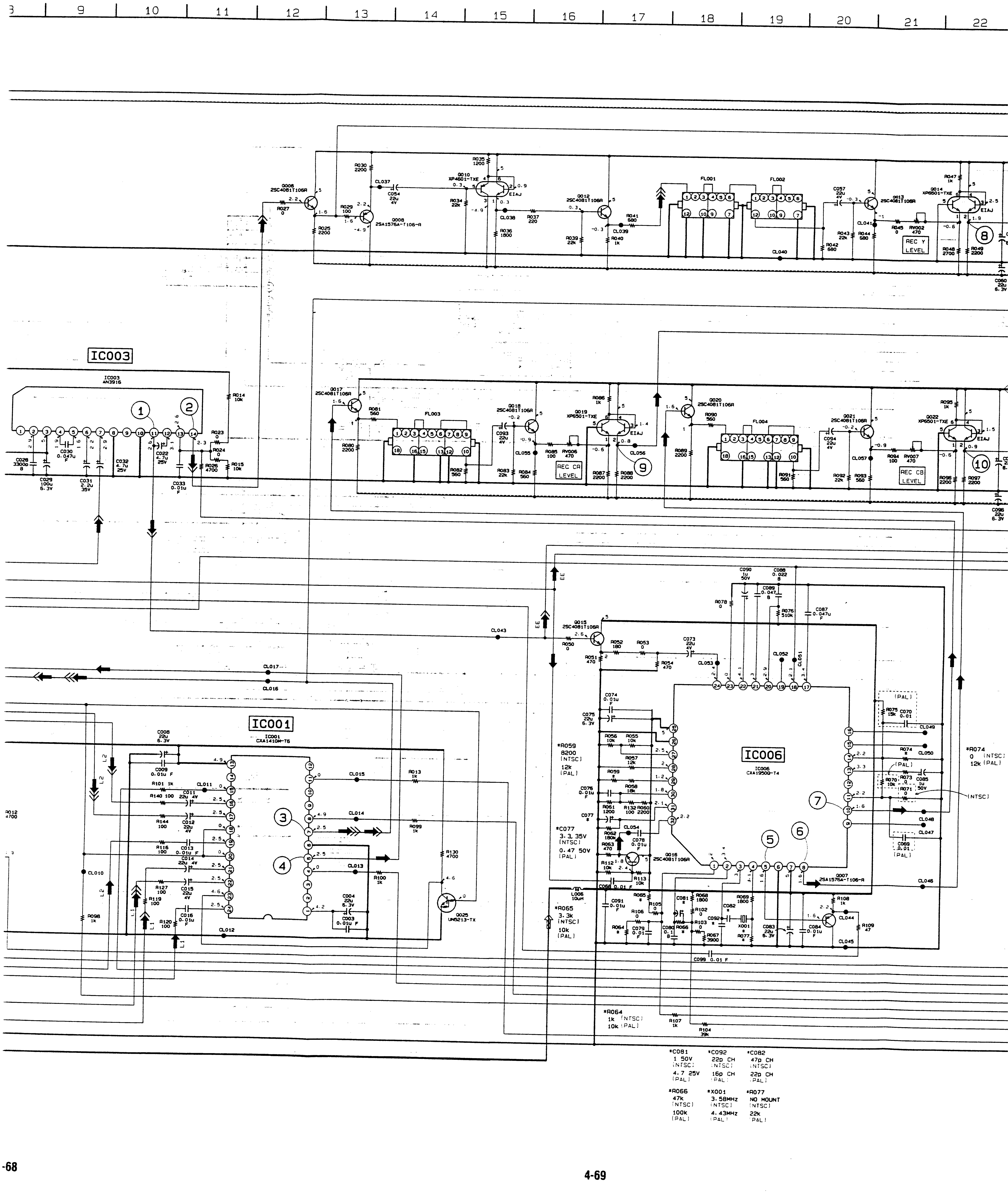
VA-99 (YC PROCESSOR 1) SCHEMATIC DIAGRAM

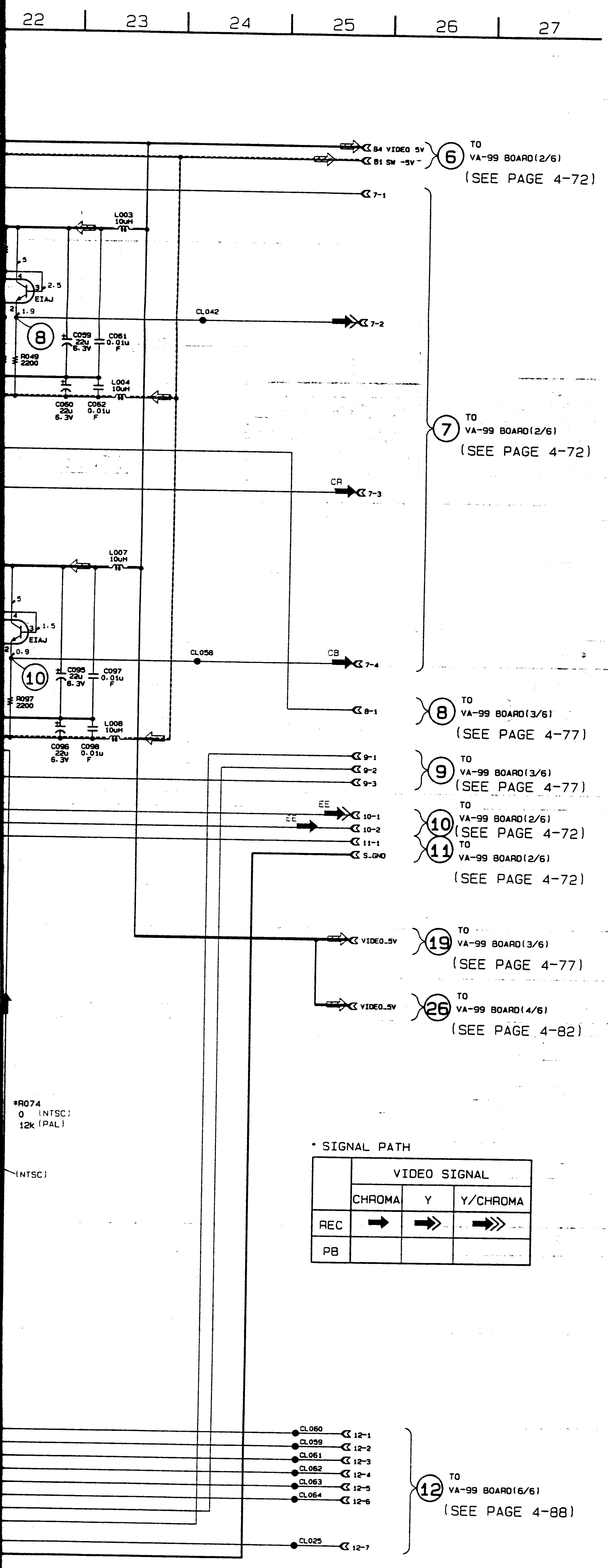
– Ref No. VA-99 BOARD: 3,000 series –


MD-65
(Tape Detect)
CN-93 (PAL)
CN-105 (NTSC)
(Connector)
VA-99
(YC Processor, System Control, Audio, Line In/Out, Mode Control)
SW-274
(Open/Close Switch)
FJ-19
(Line 2 In)
IN-51
(DV In/Out)
MD-63
(Tape Detect)
MD-64
(Tape Detect)
TK-37 (PAL)
TK-42 (NTSC)
(Tray Motor Drive)


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
VA-99 BOARD(1/6)
(YC PROCESSOR 1 BLOCK)
no mark : REC/PB mode
R : REC mode
P : PB mode
TO
VA-99 BOARD(5/6) ①
(SEE PAGE 4-85)
TO
VA-99 BOARD(4/6) ㉟
(SEE PAGE 4-80)
(PAL)
TO
VA-99 BOARD(6/6) ②
(SEE PAGE 4-88)
TO
YC-144 BOARD
CN001
(SEE PAGE 4-99)
TO
VA-99 BOARD(5/6) ③
(SEE PAGE 4-83)
TO
VA-99 BOARD(5/6) ④
(SEE PAGE 4-85)
SW -5V 81
SW_5V
UNSW_6V
A.+5V
I-1
3-1
3-2
3-3
3-4
4-1
4-2
4-3
4-4
L1
L2
(NTSC)
R028 0
R017 4.7k
C010 10 16
CL027
CL028
CL029
CL030
CL031
CL019
CL023
CL024
CL009
CL008
CL010
CL007
CL006
CL005
CL004
IC007
IC007 PQ05RF11
R016 4700
C041 0.01u F
C007 10u 16V
C045 0.01u F
C043 10u 16V
C044 22u 6.3V
C046 0.01u F
CN003 26P
UN 6V 1
UN 6V 2
SW 5V 3
SW -5V 4
GND 5
GND 6
SWT 7
GND 8
C OUT 9
GND 10
S/V 11
N.C. 12
N.C. 13
GND 14
UV RESET 15
N.C. 16
N.C. 17
N.C. 18
N.C. 19
Y IN 20
GND 21
C IN 22
GND 23
FSC 24
ACK 25
N.C. 26
L002 10uH
IC0
C027 0.01u F
C028 3300p B
C029 100u 6.3V
C030 0.047u F
C031 2.2u 35V
L001 10uH
C001 0.01u F
C002 22u 6.3V
Q001 2SC4081T106R
Q002 2SC4081T106R
Q003 2SC4081T106R
Q004 2SC4081T106R
R001 100k
R002 100
R003 4700
R004 4700
R005 3300
R006 4700
R007 100k
R008 100
R009 4700
R010 4700
R011 3300
R012 4700
R098 1k
C063 0.01u F
C064 0.01u F
4.9
09


IC003
IC003 AN3916
IC001
IC001 CXA1410M-T8
IC006
IC006 CXA1950Q-T4
REC Y LEVEL
REC CB LEVEL
REC CR LEVEL
FL001
FL002
FL003
FL004
Q006 2SC4081T106R
Q008 2SA1576A-T106-R
Q010 XP4601-TXE
Q012 2SC4081T106R
Q013 2SC4081T106R
Q014 XP6501-TXE
Q015 2SC4081T106R
Q016 2SC4081T106R
Q017 2SC4081T106R
Q018 2SC4081T106R
Q019 XP6501-TXE
Q020 2SC4081T106R
Q021 2SC4081T106R
Q022 XP6501-TXE
Q007 2SA1576A-T106-R
Q025 UN5213-TX
RV002 470
RV005 470
RV007 470
*R059 8200 (NTSC) 12k (PAL)
*C077 3.3 35V (NTSC) 0.47 50V (PAL)
*R065 3.3k (NTSC) 10k (PAL)
*R064 1k (NTSC) 10k (PAL)
*R074 0 (NTSC) 12k (PAL)
*C081 1 50V (NTSC) 4.7 25V (PAL)
*C092 22p CH (NTSC) 16p CH (PAL)
*C082 47p CH (NTSC) 22p CH (PAL)
*R066 47k (NTSC) 100k (PAL)
*X001 3.58MHz (NTSC) 4.43MHz (PAL)
*R077 NO MOUNT (NTSC) 22k (PAL)
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

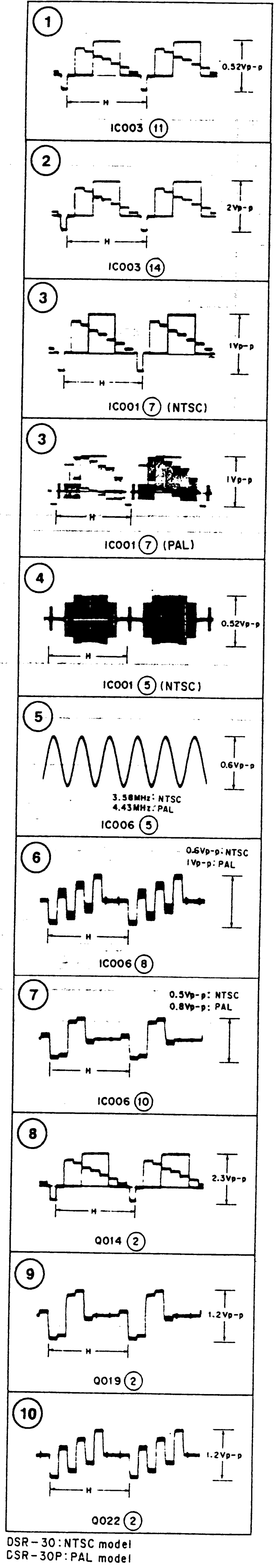

9
10
11
12
13
14
15
16
17
18
19
20
21
22
IC003
IC003 AN3916
IC001
IC001 CXA1410M-T6
IC006
IC006 CXA1950Q-T4
Q006 2SC4081T106R
Q008 2SA1576A-T106-R
Q010 XP4601-TXE
Q012 2SC4081T106R
Q013 2SC4081T106R
Q014 XP6501-TXE
Q015 2SC4081T106R
Q016 2SC4081T106R
Q007 2SA1576A-T106-R
Q017 2SC4081T106R
Q018 2SC4081T106R
Q019 XP6501-TXE
Q020 2SC4081T106R
Q021 2SC4081T106R
Q022 XP6501-TXE
Q025 UN5213-TX
FL001
FL002
FL003
FL004
REC Y LEVEL
REC CR LEVEL
REC CB LEVEL
RV002 470
RV006 470
RV007 470
EIAJ
(PAL)
(NTSC)
EE
L1
L2
X001
L006 10uH
*R059 8200 (NTSC) 12k (PAL)
*C077 3.3 35V (NTSC) 0.47 50V (PAL)
*R065 3.3k (NTSC) 10k (PAL)
*R064 1k (NTSC) 10k (PAL)
*R074 0 (NTSC) 12k (PAL)
*C081 1 50V (NTSC) 4.7 25V (PAL)
*C092 22p CH (NTSC) 16p CH (PAL)
*C082 47p CH (NTSC) 22p CH (PAL)
*R066 47k (NTSC) 100k (PAL)
*X001 3.58MHz (NTSC) 4.43MHz (PAL)
*R077 NO MOUNT (NTSC) 22k (PAL)


22
23
24
25
26
27
84 VIDEO 5V
81 SW -5V
TO
VA-99 BOARD(2/6)
(SEE PAGE 4-72)
7-1
L003
10uH
EIAJ
2.5
1.9
CL042
7-2
C059
22u
6.3V
C061
0.01u
F
R049
2200
L004
10uH
C060
22u
6.3V
C062
0.01u
F
TO
VA-99 BOARD(2/6)
(SEE PAGE 4-72)
CR
7-3
L007
10uH
EIAJ
1.5
0.9
CL058
CB
7-4
C095
22u
6.3V
C097
0.01u
F
R097
2200
L008
10uH
C096
22u
6.3V
C098
0.01u
F
8-1
TO
VA-99 BOARD(3/6)
(SEE PAGE 4-77)
9-1
9-2
9-3
TO
VA-99 BOARD(3/6)
(SEE PAGE 4-77)
EE
EE
10-1
10-2
11-1
S_GND
TO
VA-99 BOARD(2/6)
(SEE PAGE 4-72)
TO
VA-99 BOARD(2/6)
(SEE PAGE 4-72)
VIDEO_5V
TO
VA-99 BOARD(3/6)
(SEE PAGE 4-77)
VIDEO_5V
TO
VA-99 BOARD(4/6)
(SEE PAGE 4-82)
*R074
0 (NTSC)
12k (PAL)
(NTSC)
CL060
CL059
CL061
CL062
CL063
CL064
12-1
12-2
12-3
12-4
12-5
12-6
CL025
12-7
TO
VA-99 BOARD(6/6)
(SEE PAGE 4-88)

• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	⇛	⇛
PB			

VA-99 BOARD(1/6) REC

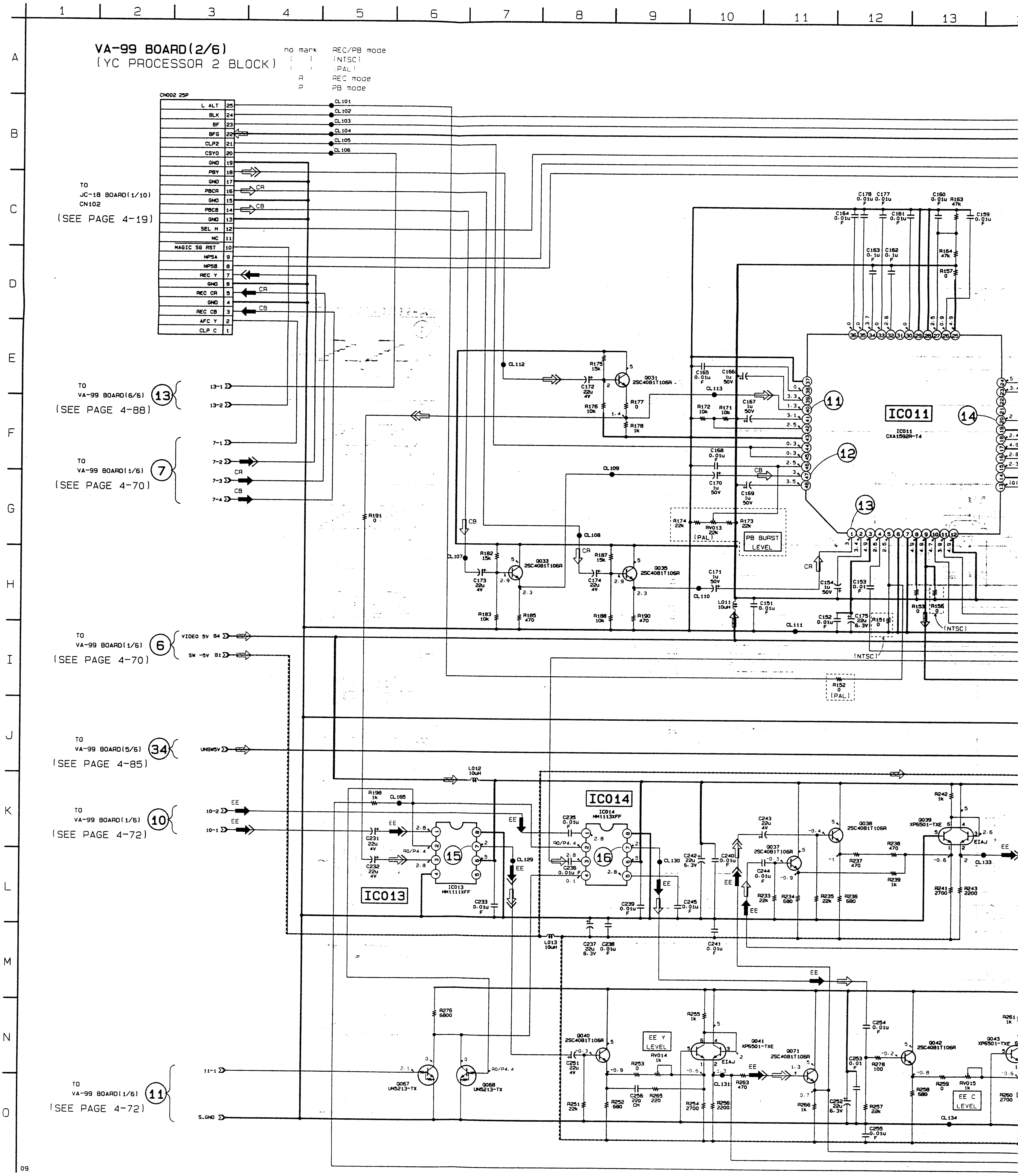


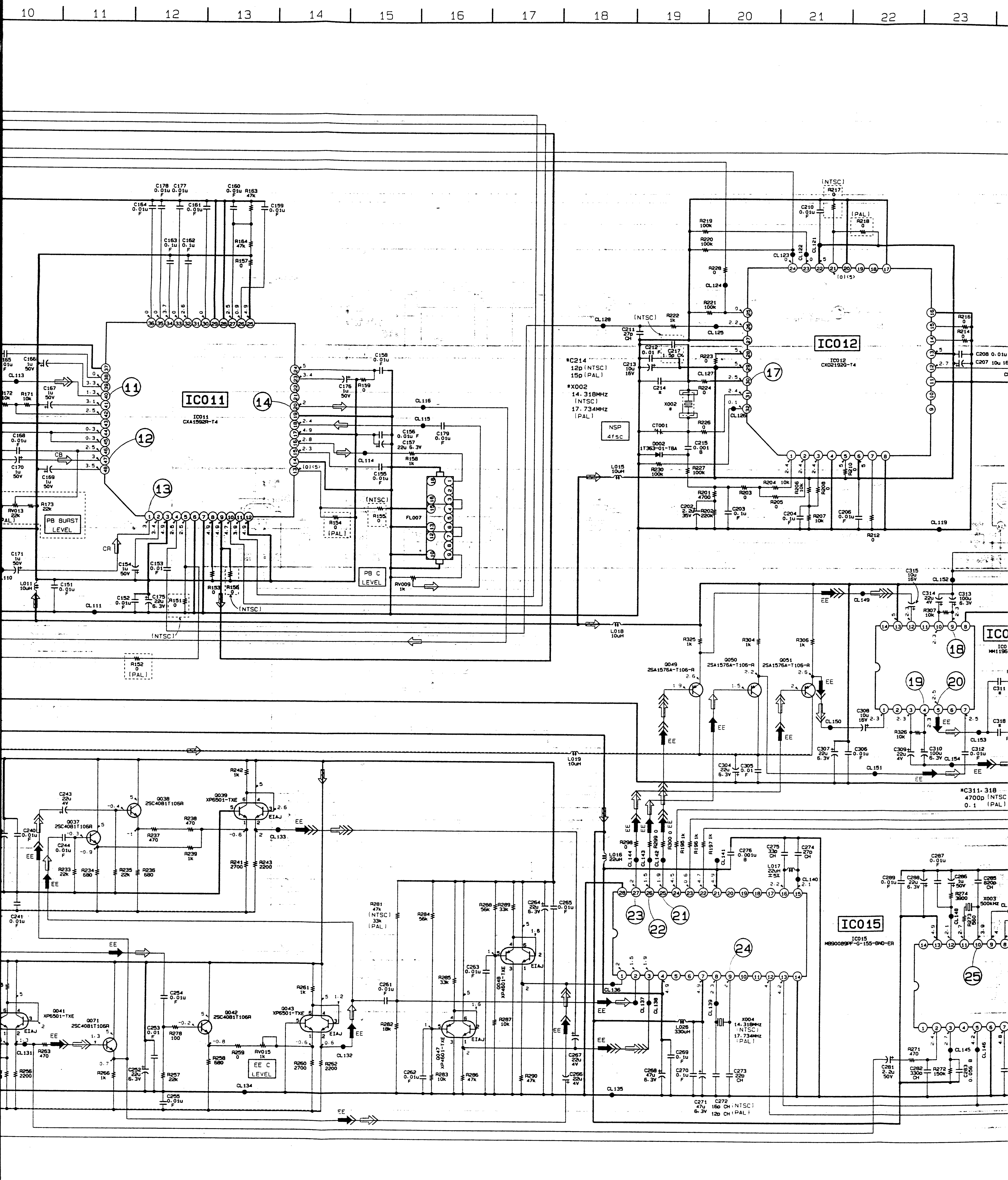
DSR-30:NTSC model
DSR-30P:PAL model

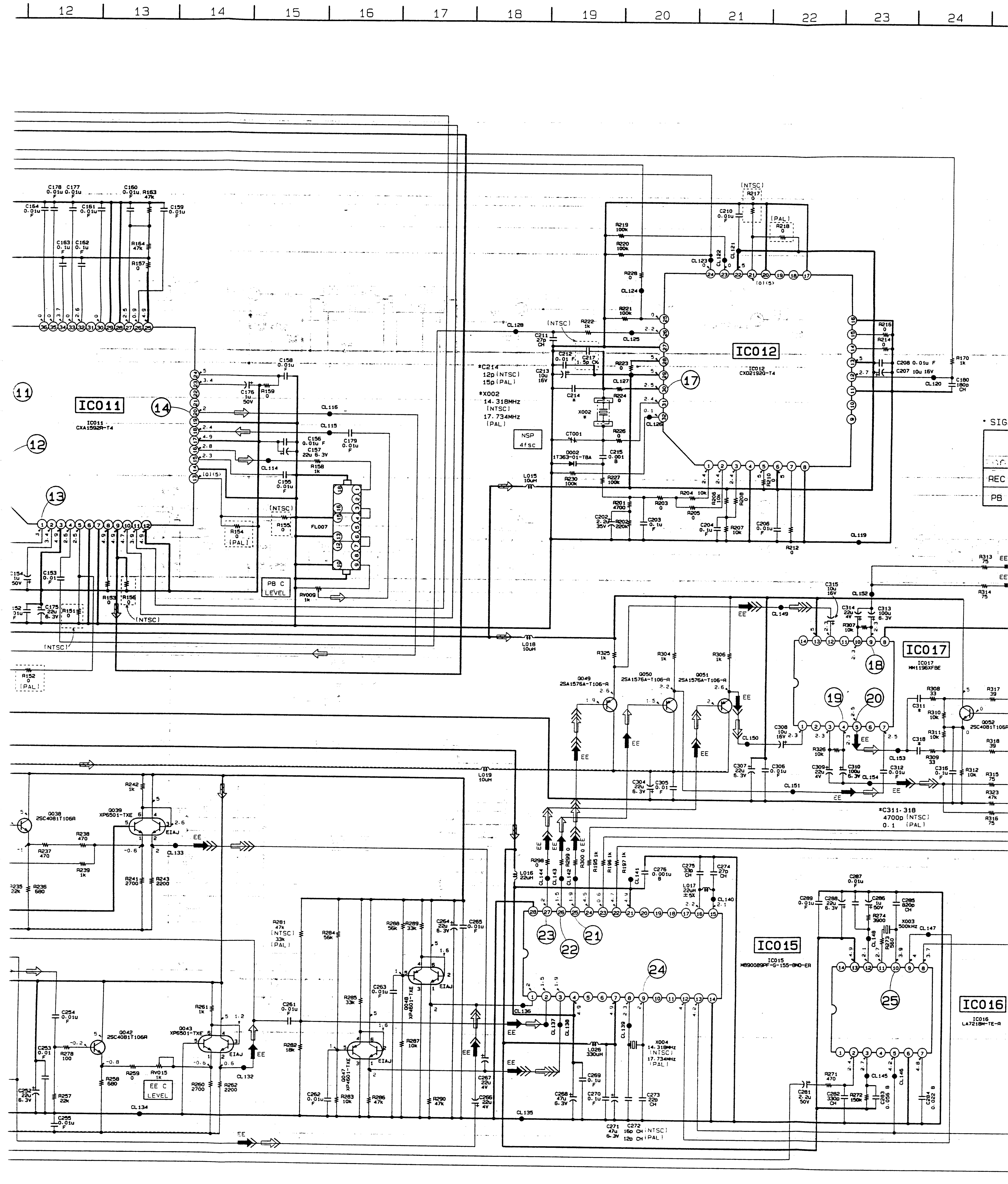
VA-99 (YC PROCESSOR 2) SCHEMATIC DIAGRAM

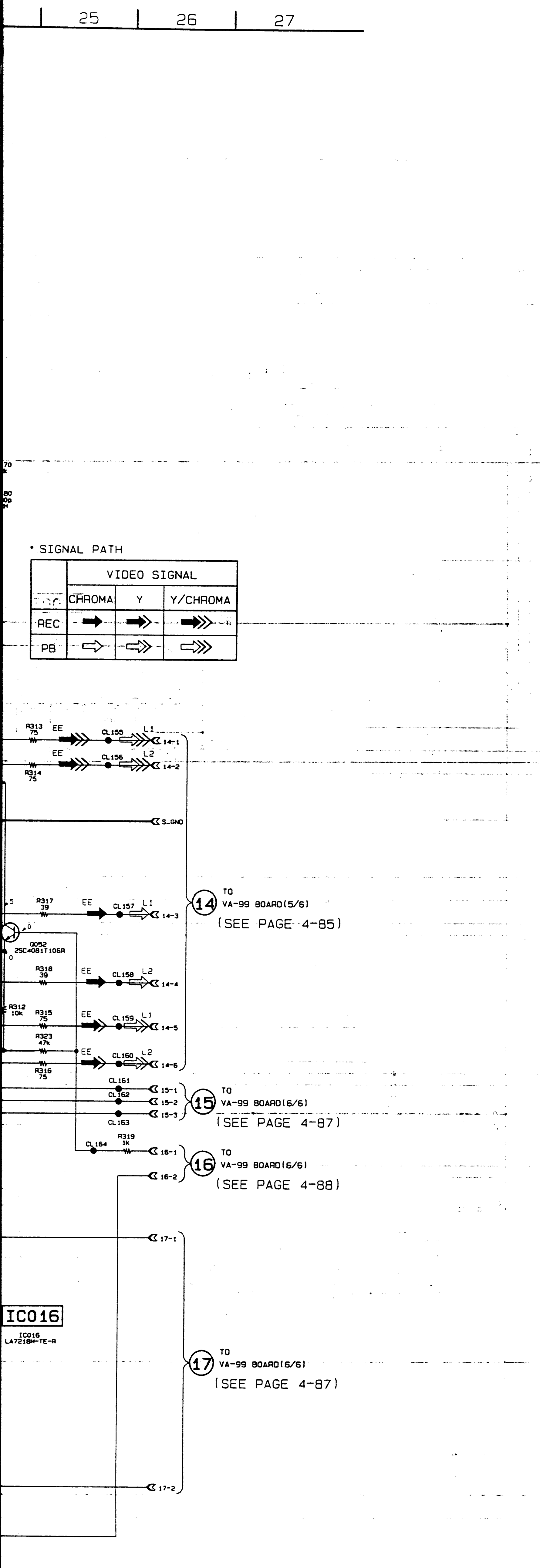
– Ref No. VA-99 BOARD: 3,000 series –

• Refer to page 4–62 for Printed Wiring Board.


VA-99 BOARD (2/6)
(YC PROCESSOR 2 BLOCK)
no mark REC/PB mode
( ) (NTSC)
[ ] [PAL]
R REC mode
P PB mode
CN002 25P
L ALT 25
BLK 24
BF 23
BFG 22
CLP2 21
CSYO 20
GND 19
PBY 18
GND 17
PBCR 16
GND 15
PBCB 14
GND 13
SEL H 12
NC 11
MAGIC SG RST 10
NPSA 9
NPSB 8
REC Y 7
GND 6
REC CR 5
GND 4
REC CB 3
AFC Y 2
CLP C 1
TO JC-18 BOARD(1/10) CN102 (SEE PAGE 4-19)
TO VA-99 BOARD(6/6) (SEE PAGE 4-88) 13
13-1
13-2
TO VA-99 BOARD(1/6) (SEE PAGE 4-70) 7
7-1
7-2
7-3
7-4
TO VA-99 BOARD(1/6) (SEE PAGE 4-70) 6
VIDEO 5V B4
SW -5V B1
TO VA-99 BOARD(5/6) (SEE PAGE 4-85) 34
UNSW5V
TO VA-99 BOARD(1/6) (SEE PAGE 4-72) 10
10-2
10-1
TO VA-99 BOARD(1/6) (SEE PAGE 4-72) 11
11-1
S_GND
IC011
IC011 CXA1592R-T4
IC013
IC013 MM1111XFF
IC014
IC014 MM1113XFF
Q031 2SC4081T106R
Q033 2SC4081T106R
Q035 2SC4081T106R
Q037 2SC4081T106R
Q038 2SC4081T106R
Q039 XP6501-TXE
Q040 2SC4081T106R
Q041 XP6501-TXE
Q042 2SC4081T106R
Q043 XP6501-TXE
Q057 UN5213-TX
Q058 UN5213-TX
Q071 2SC4081T106R
PB BURST LEVEL
RV013 22k
EE Y LEVEL
RV014 1k
EE C LEVEL
RV015 1k
L011 10uH
L012 10uH
L013 10uH
CR
CB
EE
(NTSC)
[PAL]
EIAJ
RO/P4.4

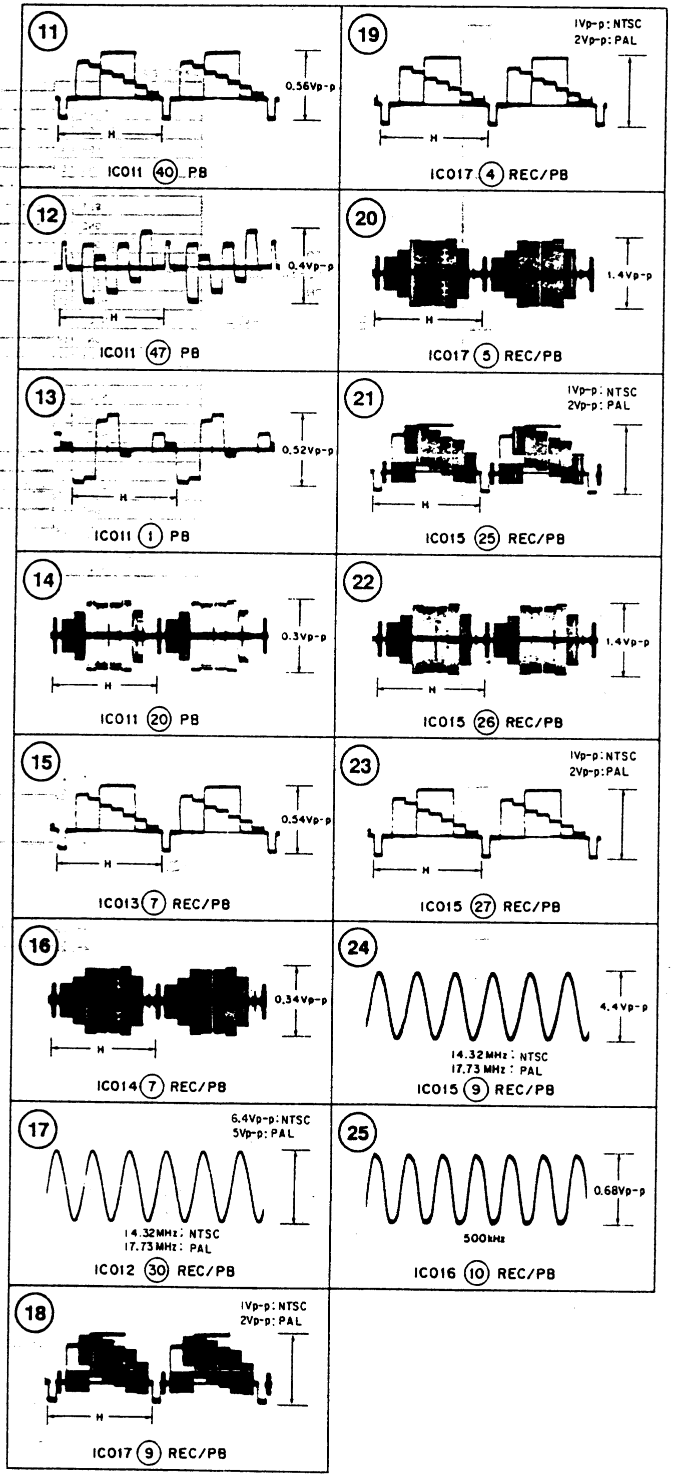

10
11
12
13
14
15
16
17
18
19
20
21
22
23
IC011
IC011 CXA1592R-T4
IC012
IC012 CXD2192Q-T4
IC015
IC015 M89008PF-G-155-BND-ER
*C214 12p (NTSC) 15p (PAL)
*X002 14.318MHz (NTSC) 17.734MHz (PAL)
NSP 4fsc
*C311-318 4700p (NTSC) 0.1 (PAL)
X004 14.318MHz (NTSC) 17.734MHz (PAL)
PB BURST LEVEL
PB C LEVEL
EE C LEVEL
FL007
Q037 2SC4081T106R
Q038 2SC4081T106R
Q039 XP6501-TXE
Q041 XP6501-TXE
Q071 2SC4081T106R
Q042 2SC4081T106R
Q043 XP6501-TXE
Q047 XP4601-TXE
Q048 XP4601-TXE
Q049 2SA1576A-T106-R
Q050 2SA1576A-T106-R
Q051 2SA1576A-T106-R
EIAJ
EE
CR
CB
(NTSC)
(PAL)
⑪
⑫
⑬
⑭
⑰
⑱
⑲
⑳
㉑
㉒
㉓
㉔
㉕


12
13
14
15
16
17
18
19
20
21
22
23
24
IC011
CXA1592R-T4
IC012
CXD2192Q-T4
IC015
M89008PF-G-155-BND-ER
IC016
LA7218M-TE-R
IC017
MM1196XFBE
NSP
4fsc
PB C
LEVEL
EE C
LEVEL
FL007
RV009
1k
RV015
1k
*C214
12p (NTSC)
15p (PAL)
*X002
14.318MHz
(NTSC)
17.734MHz
(PAL)
X004
14.318MHz
(NTSC)
17.734MHz
(PAL)
X003
500kHz
*C311-318
4700p (NTSC)
0.1 (PAL)
Q038
2SC4081T106R
Q039
XP6501-TXE
Q042
2SC4081T106R
Q043
XP6501-TXE
Q047
XP4601-TXE
Q048
XP4601-TXE
Q049
2SA1576A-T106-R
Q050
2SA1576A-T106-R
Q051
2SA1576A-T106-R
Q052
2SC4081T106R
D002
1T363-01-T8A
L015
10uH
L016
22uH
L017
22uH
L018
10uH
L019
10uH
L026
330uH
(NTSC)
(PAL)
EE
EIAJ
SIG
REC
PB
(11)
(12)
(13)
(14)
(17)
(18)
(19)
(20)
(21)
(22)
(23)
(24)
(25)



25
26
27
• SIGNAL PATH
VIDEO SIGNAL
CHROMA
Y
Y/CHROMA
REC
PB
R313 75
EE
CL155
L1
14-1
EE
CL156
L2
14-2
R314 75
S-GND
R317 39
EE
CL157
L1
14-3
Q052 2SC4081T106R
R318 39
EE
CL158
L2
14-4
R312 10k
R315 75
EE
CL159
L1
14-5
R323 47k
EE
CL160
L2
14-6
R316 75
CL161
CL162
CL163
15-1
15-2
15-3
CL164
R319 1k
16-1
16-2
17-1
17-2
IC016
IC016 LA7218M-TE-R
TO
VA-99 BOARD(5/6)
(SEE PAGE 4-85)
TO
VA-99 BOARD(6/6)
(SEE PAGE 4-87)
TO
VA-99 BOARD(6/6)
(SEE PAGE 4-88)
TO
VA-99 BOARD(6/6)
(SEE PAGE 4-87)

VA-99 BOARD (2/6)

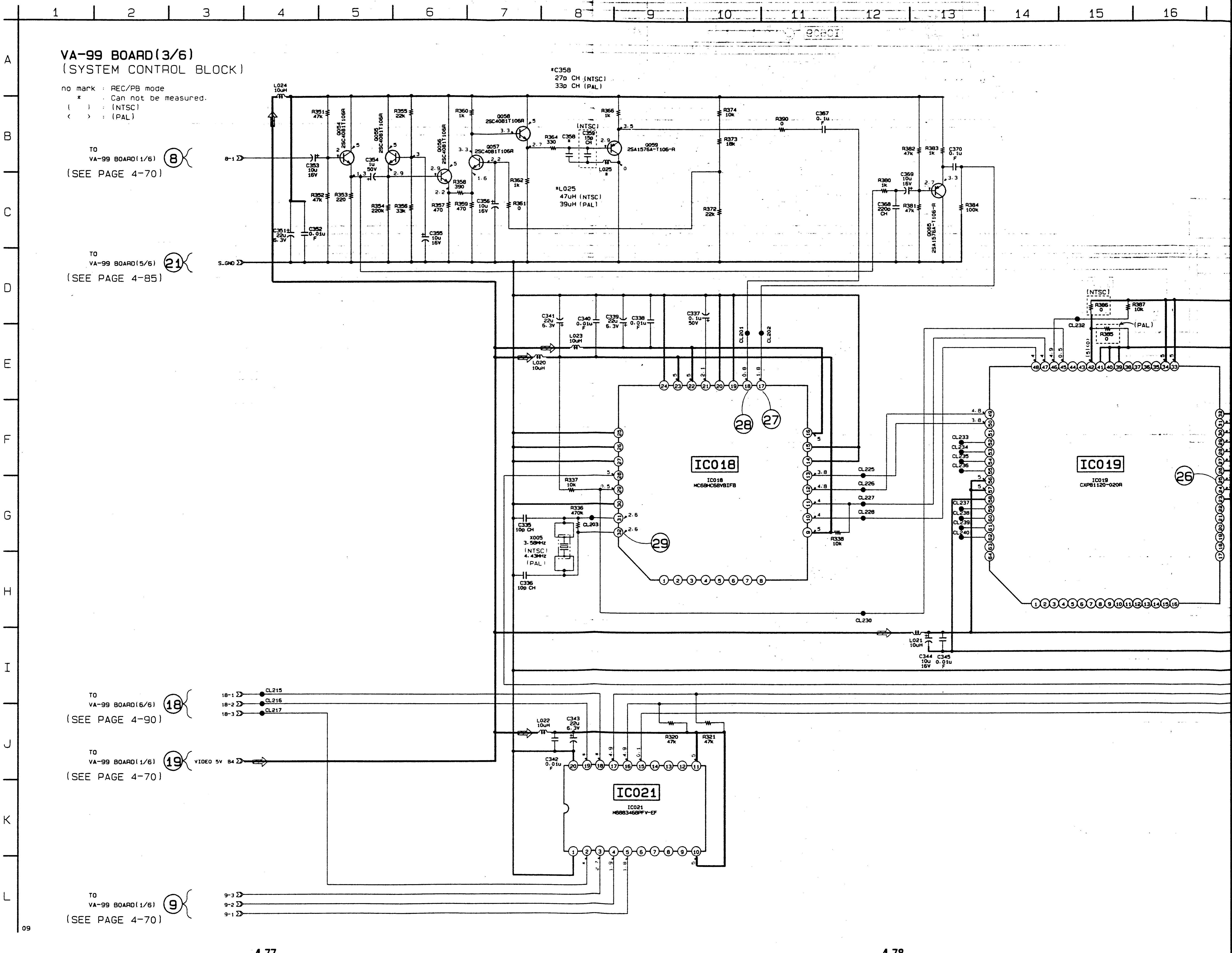


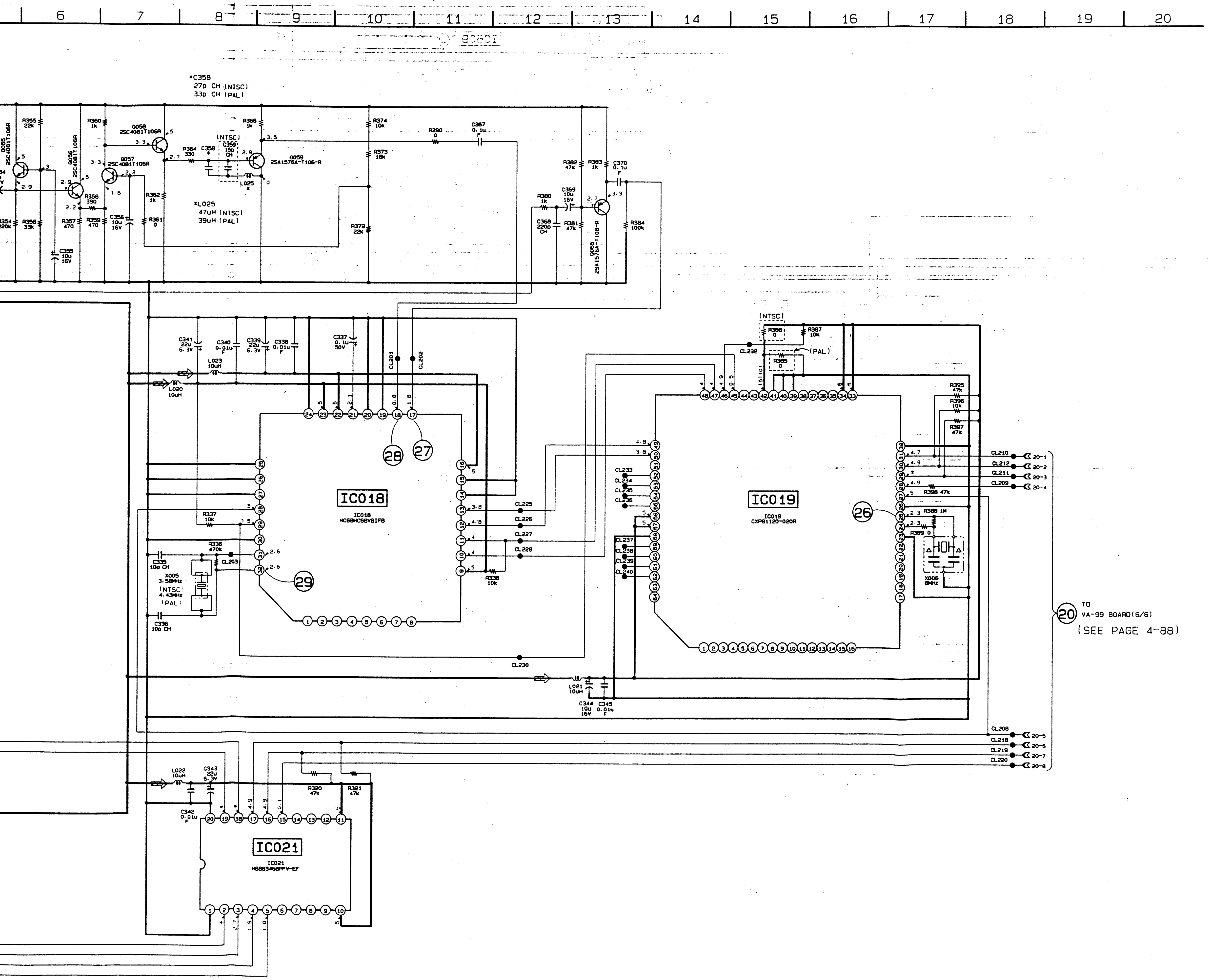
DSR-30: NTSC model
DSR-30P: PAL model

VA-99 (SYSTEM CONTROL) SCHEMATIC DIAGRAM

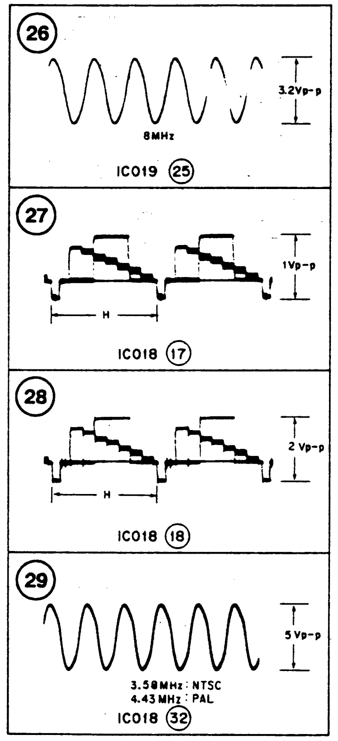
– Ref No. VA-99 BOARD: 3,000 series –

- Refer to page 4–62 for Printed Wiring Board.


VA-99 BOARD (3/6)
(SYSTEM CONTROL BLOCK)
no mark : REC/PB mode
* : Can not be measured.
( ) : (NTSC)
< > : (PAL)
TO VA-99 BOARD (1/6) (SEE PAGE 4-70) ⑧
TO VA-99 BOARD (5/6) (SEE PAGE 4-85) ㉑
TO VA-99 BOARD (6/6) (SEE PAGE 4-90) ⑱
TO VA-99 BOARD (1/6) (SEE PAGE 4-70) ⑲
TO VA-99 BOARD (1/6) (SEE PAGE 4-70) ⑨
8-1
S.GND
18-1
18-2
18-3
VIDEO 5V B4
9-3
9-2
9-1
*C358 27p CH (NTSC) 33p CH (PAL)
*L025 47uH (NTSC) 39uH (PAL)
Q054 2SC4081T106R
Q055 2SC4081T106R
Q056 2SC4081T106R
Q057 2SC4081T106R
Q058 2SC4081T106R
Q059 2SA1576A-T106-R
Q065 2SA1576A-T106-R
IC018
IC018 MC68HC68VBIFB
IC019
IC019 CXP81120-020A
IC021
IC021 M6883468FV-EF
X005 3.58MHz (NTSC) 4.43MHz (PAL)
㉖
㉗
㉘
㉙
CL201
CL202
CL203
CL215
CL216
CL217
CL225
CL226
CL227
CL228
CL230
CL232
CL233
CL234
CL235
CL236
CL237
CL238
CL239
CL240
L020 10uH
L021 10uH
L022 10uH
L023 10uH
L024 10uH
R320 47k
R321 47k
R336 470k
R337 10k
R338 10k
R351 47k
R352 47k
R353 220
R354 220k
R355 22k
R356 33k
R357 470
R358 390
R359 470
R360 1k
R361 0
R362 1k
R364 330
R366 1k
R372 22k
R373 18k
R374 10k
R380 1k
R381 47k
R382 47k
R383 1k
R384 100k
R385 0
R386 0
R387 10k
R390 0
C335 10p CH
C336 10p CH
C337 0.1u 50V
C338 0.01u F
C339 22u 6.3V
C340 0.01u F
C341 22u 6.3V
C342 0.01u F
C343 22u 6.3V
C344 10u 16V
C345 0.01u F
C351 22u 6.3V
C352 0.01u F
C353 10u 16V
C354 1u 50V
C355 10u 16V
C356 10u 16V
C359 15p CH
C367 0.1u F
C368 220p CH
C369 10u 16V
C370 0.1u F
(NTSC)
(PAL)
09


6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
*C358
27p CH (NTSC)
33p CH (PAL)
*L025
47uH (NTSC)
39uH (PAL)
Q055 2SC4081T106R
Q056 2SC4081T106R
Q057 2SC4081T106R
Q058 2SC4081T106R
Q059 2SA1576A-T106-R
Q065 2SA1576A-T106-R
R355 22k
R356 33k
R357 470
R358 390
R359 470
R360 1k
R361 0
R362 1k
R364 330
R366 1k
R372 22k
R373 18k
R374 10k
R380 1k
R381 47k
R382 47k
R383 1k
R384 100k
R390 0
C355 10u 16V
C356 10u 16V
C358 *
C359 15p CH
C367 0.1u F
C368 2200 CH
C369 10u 16V
C370 0.1u F
L025 *
IC018
IC018 MC68HC68V8IFB
IC019
IC019 CXP81120-020A
IC021
IC021 M6883468FV-EF
C335 10p CH
C336 10p CH
X005 3.58MHz (NTSC) 4.43MHz (PAL)
R336 470k
R337 10k
R338 10k
CL203
C337 0.1u 50V
C338 0.01u F
C339 22u 6.3V
C340 0.01u F
C341 22u 6.3V
L023 10uH
L020 10uH
CL201
CL202
CL225
CL226
CL227
CL228
CL230
CL232
CL233
CL234
CL235
CL236
CL237
CL238
CL239
CL240
(NTSC)
(PAL)
R385 0
R386 0
R387 10k
R395 47k
R396 10k
R397 47k
R398 47k
R388 1M
R389 0
X006 8MHz
L021 10uH
C344 10u 16V
C345 0.01u F
L022 10uH
C343 22u 6.3V
C342 0.01u F
R320 47k
R321 47k
CL210
CL212
CL211
CL209
CL208
CL218
CL219
CL220
20-1
20-2
20-3
20-4
20-5
20-6
20-7
20-8
26
27
28
29
20
TO
VA-99 BOARD(6/6)
(SEE PAGE 4-88)

VA-99 BOARD(3/6)REC/PB

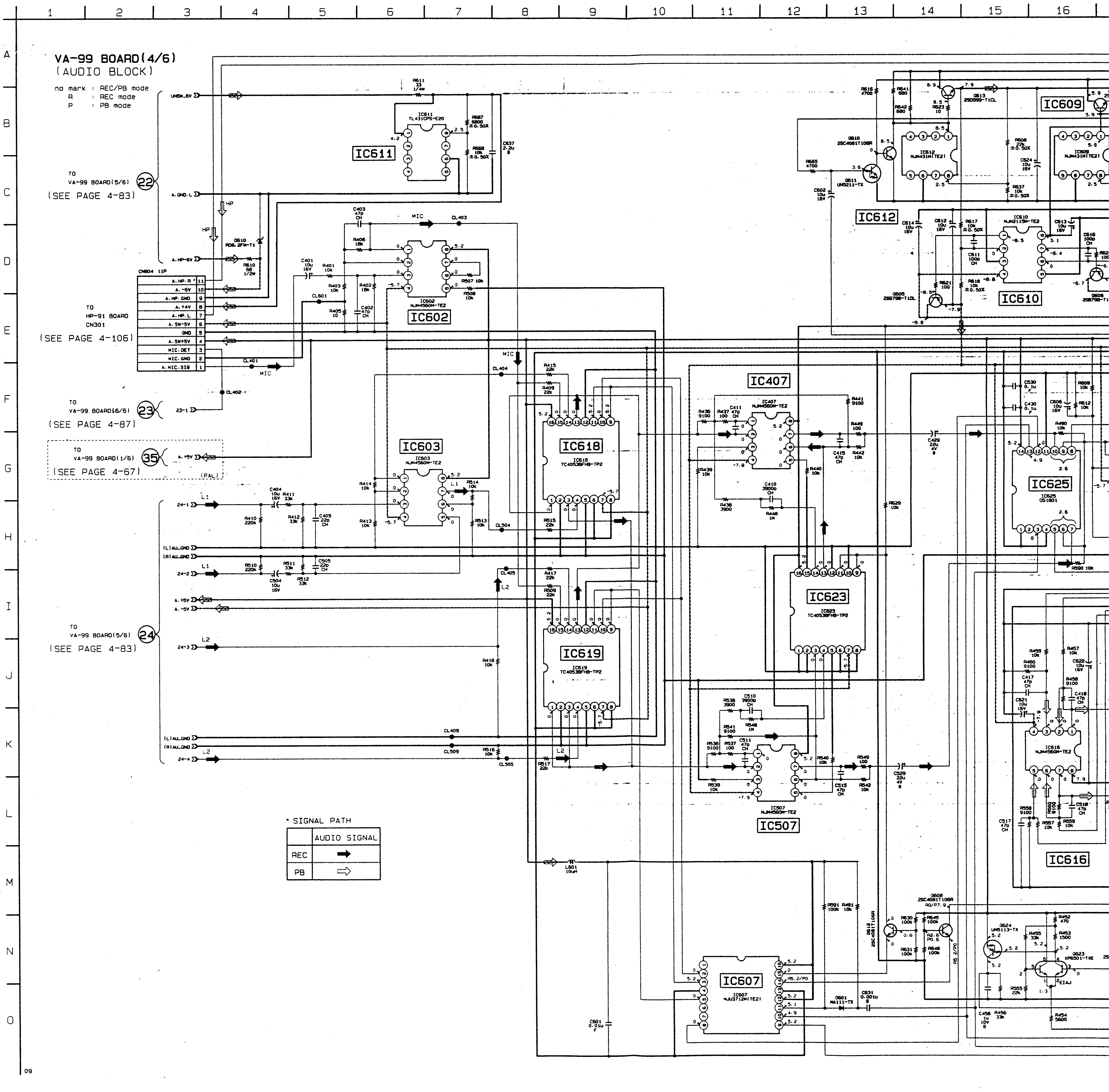


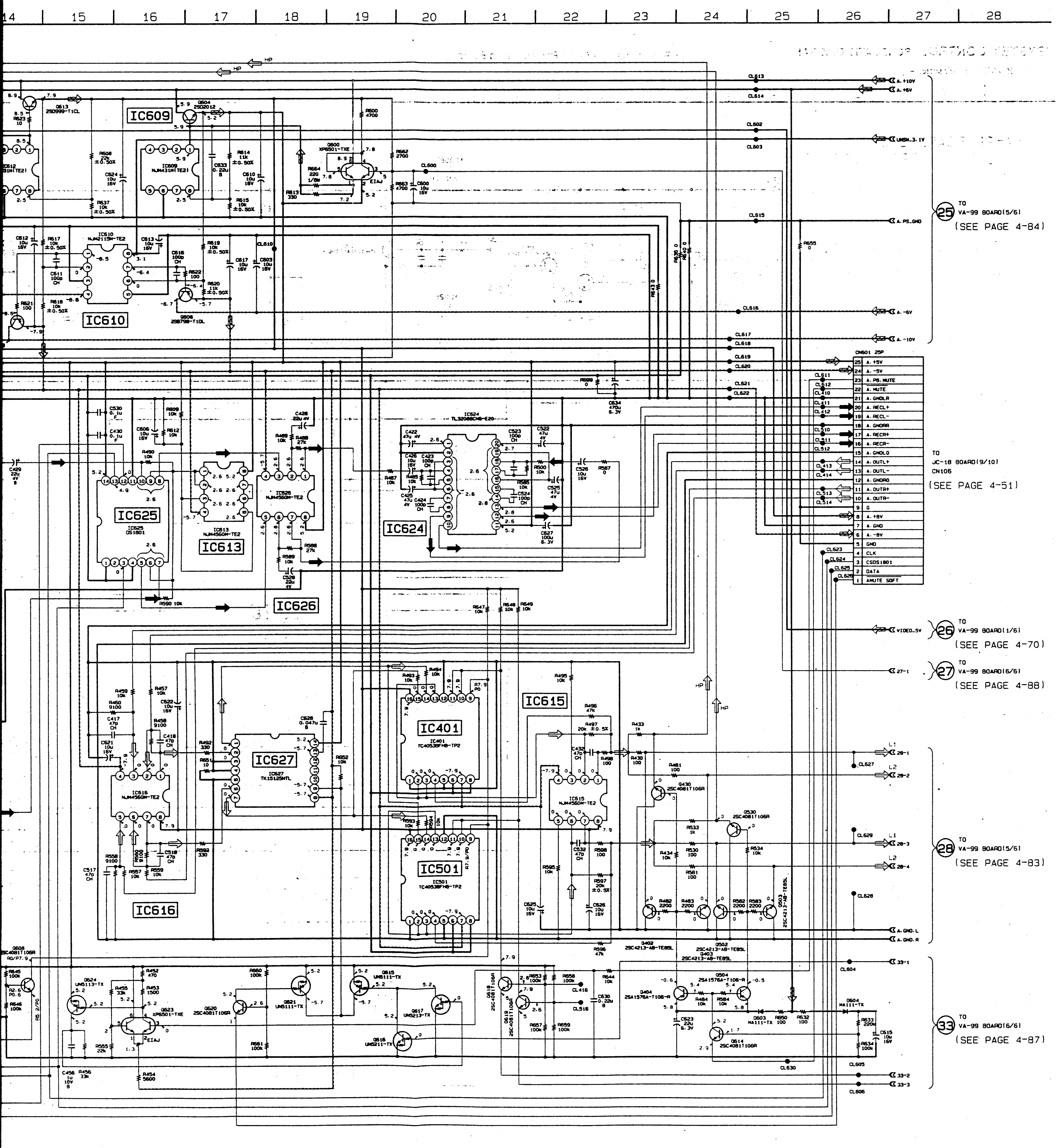
DSR-30: NTSC model
DSR-30P: PAL model

VA-99 (AUDIO) SCHEMATIC DIAGRAM

– Ref No. VA-99 BOARD: 3,000 series –

• Refer to page 4–62 for Printed Wiring Board.

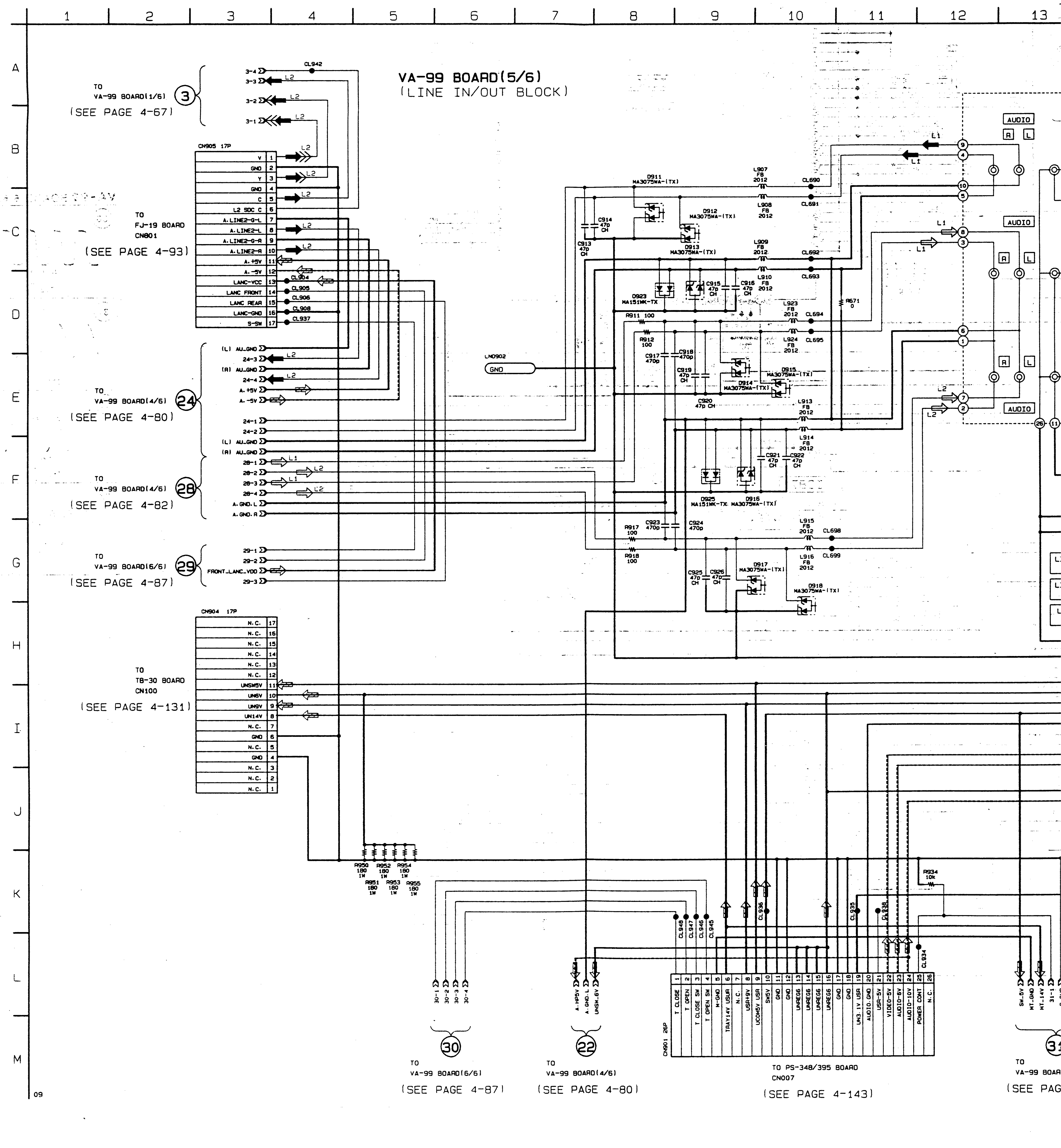

VA-99 BOARD(4/6)
(AUDIO BLOCK)
no mark : REC/PB mode
R : REC mode
P : PB mode
TO VA-99 BOARD(5/6) ㉒ (SEE PAGE 4-83)
TO HP-91 BOARD CN301 (SEE PAGE 4-106)
TO VA-99 BOARD(6/6) ㉓ (SEE PAGE 4-87)
TO VA-99 BOARD(1/6) ㉟ (SEE PAGE 4-67) (PAL)
TO VA-99 BOARD(5/6) ㉔ (SEE PAGE 4-83)
CN604 11P
A.HP.R 11
A.-6V 10
A.HP.GND 9
A.+4V 8
A.HP.L 7
A.SW-5V 6
GND 5
A.SW+5V 4
MIC.DET 3
MIC.GND 2
A.MIC.SIG 1
IC611 TL431CPS-E20
IC602 NJM4560M-TE2
IC603 NJM4560M-TE2
IC618 TC4053BFHB-TP2
IC619 TC4053BFHB-TP2
IC407 NJM4560M-TE2
IC623 TC4053BFHB-TP2
IC507 NJM4560M-TE2
IC607 NJU3712M(TE2)
IC612 NJM431M(TE2)
IC609 NJM431M(TE2)
IC610 NJM2115M-TE2
IC625 CS1801
IC616 NJM4560M-TE2
Q610 2SC4081T106R
Q611 UN5211-TX
Q613 2SD999-T1CL
Q605 2SB798-T1DL
Q606 2SB798-T1
Q608 2SC4081T106R
Q612 2SC4081T106R
Q624 UN5113-TX
Q623 XP6501-TXE
D610 RD6.2FM-T1
D601 MA111-TX
L601 10uH
MIC
HP
L1
L2
* SIGNAL PATH
AUDIO SIGNAL
REC
PB

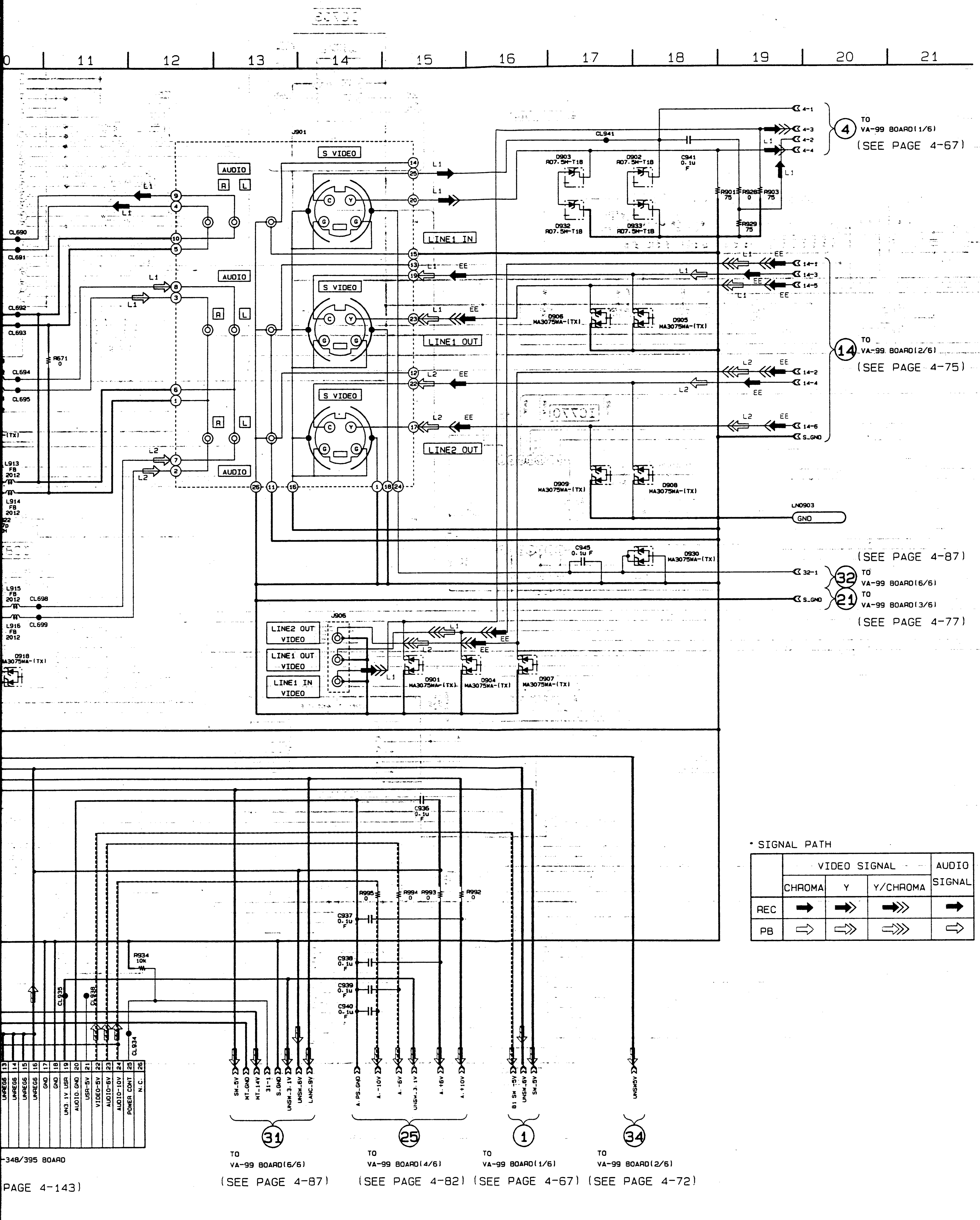

14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
IC609
IC610
IC625
IC613
IC626
IC624
IC401
IC627
IC615
IC501
IC616
A.+10V
A.+6V
UNSW_3.1V
A.PS_GND
A.-6V
A.-10V
TO
VA-99 BOARD(5/6)
(SEE PAGE 4-84)
CN601 25P
25 A.+5V
24 A.-5V
23 A.PB.MUTE
22 A.MUTE
21 A.GNDLR
20 A.RECL+
19 A.RECL-
18 A.GNDRR
17 A.RECR+
16 A.RECR-
15 A.GNDLO
14 A.OUTL+
13 A.OUTL-
12 A.GNDRO
11 A.OUTR+
10 A.OUTR-
9 G
8 A.+8V
7 A.GND
6 A.-8V
5 GND
4 CLK
3 CSDS1801
2 DATA
1 AMUTE SOFT
TO
JC-18 BOARD(9/10)
CN106
(SEE PAGE 4-51)
VIDEO_5V
TO
VA-99 BOARD(1/6)
(SEE PAGE 4-70)
27-1
TO
VA-99 BOARD(6/6)
(SEE PAGE 4-88)
28-1
28-2
28-3
28-4
TO
VA-99 BOARD(5/6)
(SEE PAGE 4-83)
A.GND.L
A.GND.R
33-1
33-2
33-3
TO
VA-99 BOARD(6/6)
(SEE PAGE 4-87)
HP

VA-99 (LINE IN/OUT) SCHEMATIC DIAGRAM

– Ref No. VA-99 BOARD: 3,000 series –

• Refer to page 4–62 for Printed Wiring Board.

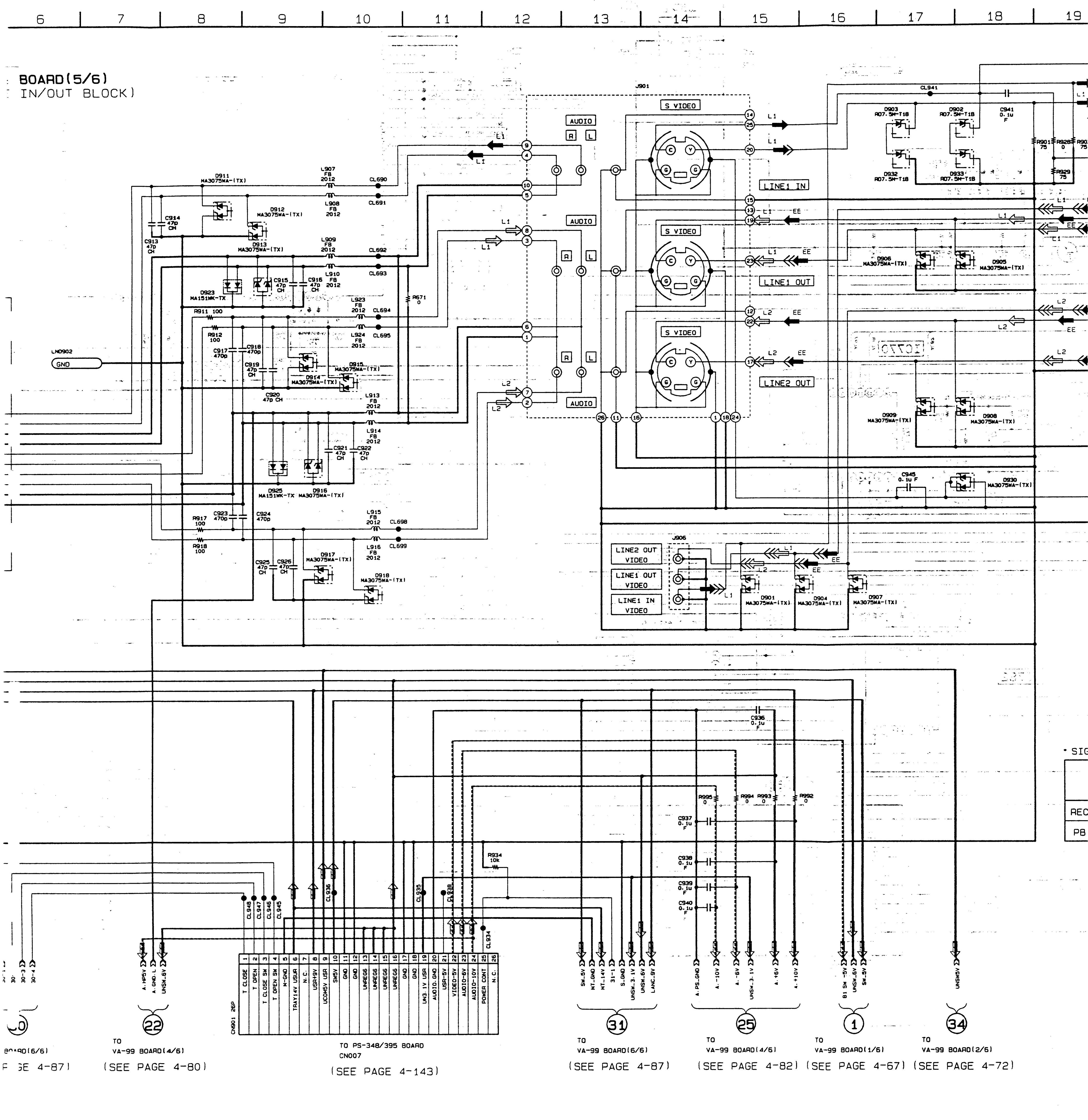

VA-99 BOARD(5/6)
(LINE IN/OUT BLOCK)
TO VA-99 BOARD(1/6) ③ (SEE PAGE 4-67)
3-4
3-3
3-2
3-1
CL942
CN905 17P
V 1
GND 2
Y 3
GND 4
C 5
L2 SOC C 6
A.LINE2-G-L 7
A.LINE2-L 8
A.LINE2-G-R 9
A.LINE2-R 10
A.+5V 11
A.-5V 12
LANC-VCC 13
LANC FRONT 14
LANC REAR 15
LANC-GND 16
S-SW 17
TO FJ-19 BOARD CN801 (SEE PAGE 4-93)
CL904
CL905
CL906
CL908
CL937
(L) AU_GND
24-3
(R) AU_GND
24-4
A.+5V
A.-5V
TO VA-99 BOARD(4/6) ㉔ (SEE PAGE 4-80)
24-1
24-2
(L) AU_GND
(R) AU_GND
28-1
28-2
28-3
28-4
A.GND.L
A.GND.R
TO VA-99 BOARD(4/6) ㉘ (SEE PAGE 4-82)
29-1
29-2
FRONT_LANC_VDD
29-3
TO VA-99 BOARD(6/6) ㉙ (SEE PAGE 4-87)
CN904 17P
N.C. 17
N.C. 16
N.C. 15
N.C. 14
N.C. 13
N.C. 12
UNSW5V 11
UN5V 10
UN9V 9
UN14V 8
N.C. 7
GND 6
N.C. 5
GND 4
N.C. 3
N.C. 2
N.C. 1
TO TB-30 BOARD CN100 (SEE PAGE 4-131)
LND902
GND
D911 MA3075WA-(TX)
D912 MA3075WA-(TX)
D913 MA3075WA-(TX)
D914 MA3075WA-(TX)
D915 MA3075WA-(TX)
D916 MA3075WA-(TX)
D917 MA3075WA-(TX)
D918 MA3075WA-(TX)
D923 MA151WK-TX
D925 MA151WK-TX
C913 47p CH
C914 47p CH
C915 47p CH
C916 47p CH
C917 470p
C918 470p
C919 47p CH
C920 47p CH
C921 47p CH
C922 47p CH
C923 470p
C924 470p
C925 47p CH
C926 47p CH
L907 FB 2012
L908 FB 2012
L909 FB 2012
L910 FB 2012
L913 FB 2012
L914 FB 2012
L915 FB 2012
L916 FB 2012
L923 FB 2012
L924 FB 2012
CL690
CL691
CL692
CL693
CL694
CL695
CL698
CL699
R671 0
R911 100
R912 100
R917 100
R918 100
R950 180 1W
R951 180 1W
R952 180 1W
R953 180 1W
R954 180 1W
R955 180 1W
R934 10k
CL934
CL935
CL936
CL938
CL945
CL946
CL947
CL948
AUDIO
R
L
L1
L2
30-1
30-2
30-3
30-4
TO VA-99 BOARD(6/6) ㉚ (SEE PAGE 4-87)
A.HP5V
A.GND.L
UNSW.6V
TO VA-99 BOARD(4/6) ㉒ (SEE PAGE 4-80)
CN901 26P
1 T CLOSE
2 T OPEN
3 T CLOSE SW
4 T OPEN SW
5 M-GND
6 TRAY14V USUR
7 N.C.
8 USR14V
9 UCOM5V USR
10 SW5V
11 GND
12 UNREG6
13 UNREG6
14 UNREG6
15 UNREG6
16 GND
17 GND
18 UN3.1V USR
19 AUDIO GND
20 USR-5V
21 VIDEO-5V
22 AUDIO-10V
23 POWER CONT
24 N.C.
TO PS-348/395 BOARD CN007 (SEE PAGE 4-143)
SW.5V
MT.GND
MT.14V
31-1
TO VA-99 BOAR
(SEE PAG
09


10
11
12
13
14
15
16
17
18
19
20
21
J901
S VIDEO
AUDIO
R
L
LINE1 IN
LINE1 OUT
LINE2 OUT
L1
L2
EE
CL690
CL691
CL692
CL693
CL694
CL695
R671
0
L913
FB
2012
L914
FB
2012
L915
FB
2012
L916
FB
2012
CL698
CL699
D918
MA3075WA-(TX)
CL941
D903
RD7.5M-T1B
D902
RD7.5M-T1B
C941
0.1u
F
R901
75
R928
0
R903
75
R929
75
D932
RD7.5M-T1B
D933
RD7.5M-T1B
D906
MA3075WA-(TX)
D905
MA3075WA-(TX)
D909
MA3075WA-(TX)
D908
MA3075WA-(TX)
C945
0.1u F
D930
MA3075WA-(TX)
J906
LINE2 OUT VIDEO
LINE1 OUT VIDEO
LINE1 IN VIDEO
D901
MA3075WA-(TX)
D904
MA3075WA-(TX)
D907
MA3075WA-(TX)
4-1
4-3
4-2
4-4
4
TO
VA-99 BOARD(1/6)
(SEE PAGE 4-67)
14-1
14-3
14-5
14-2
14-4
14-6
S_GND
14
TO
VA-99 BOARD(2/6)
(SEE PAGE 4-75)
LND903
GND
(SEE PAGE 4-87)
32-1
32
TO
VA-99 BOARD(6/6)
S_GND
21
TO
VA-99 BOARD(3/6)
(SEE PAGE 4-77)
C936
0.1u
F
R995
0
R994
0
R993
0
R992
0
C937
0.1u
F
C938
0.1u
F
C939
0.1u
F
C940
0.1u
F
R934
10k
CL935
CL936
CL934
13 UNREG6
14 UNREG6
15 UNREG6
16 UNREG6
17 GND
18 GND
19 UN3.1V USR
20 AUDIO_GND
21 USR-5V
22 VIDEO-6V
23 AUDIO-6V
24 AUDIO-10V
25 POWER CONT
26 N.C.
-348/395 BOARD
PAGE 4-143)
SW_5V
MT_GND
MT_14V
31-1
S_GND
UNSW_3.1V
UNSW_6V
LANC_9V
A_PS_GND
A_-10V
A_-6V
UNSW_3.1V
A_+6V
A_+10V
B1 SW -5V
UNSW_6V
SW_5V
UNSW5V
31
TO
VA-99 BOARD(6/6)
(SEE PAGE 4-87)
25
TO
VA-99 BOARD(4/6)
(SEE PAGE 4-82)
1
TO
VA-99 BOARD(1/6)
(SEE PAGE 4-67)
34
TO
VA-99 BOARD(2/6)
(SEE PAGE 4-72)

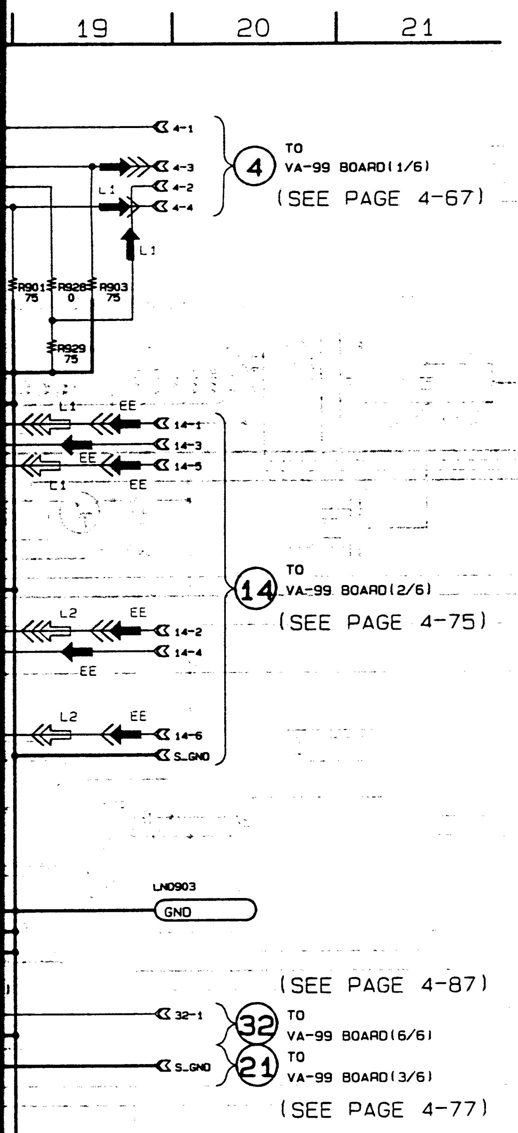
• SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡	➡»	➡»»	➡
PB	⇨	⇨»	⇨»»	⇨

2 for Printed Wiring Board.



6
7
8
9
10
11
12
13
14
15
16
17
18
19
BOARD(5/6)
IN/OUT BLOCK)
J901
S VIDEO
AUDIO
R
L
LINE1 IN
LINE1 OUT
LINE2 OUT
L1
L2
EE
D911 MA3075WA-(TX)
D912 MA3075WA-(TX)
D913 MA3075WA-(TX)
D914 MA3075WA-(TX)
D915 MA3075WA-(TX)
D916 MA3075WA-(TX)
D917 MA3075WA-(TX)
D918 MA3075WA-(TX)
D923 MA151WK-TX
D925 MA151WK-TX
D903 R07.5M-T1B
D902 R07.5M-T1B
D932 R07.5M-T1B
D933 R07.5M-T1B
D906 MA3075WA-(TX)
D905 MA3075WA-(TX)
D909 MA3075WA-(TX)
D908 MA3075WA-(TX)
D930 MA3075WA-(TX)
D901 MA3075WA-(TX)
D904 MA3075WA-(TX)
D907 MA3075WA-(TX)
C941 0.1u F
C945 0.1u F
CL941
R901 75
R928 0
R929 75
L907 FB 2012
L908 FB 2012
L909 FB 2012
L910 FB 2012
L913 FB 2012
L914 FB 2012
L915 FB 2012
L916 FB 2012
L923 FB 2012
L924 FB 2012
CL690
CL691
CL692
CL693
CL694
CL695
CL698
CL699
R671 0
C913 47p CH
C914 47p CH
C915 47p CH
C916 47p CH
C917 470p
C918 470p
C919 47p CH
C920 47p CH
C921 47p CH
C922 47p CH
C923 470p
C924 470p
C925 47p CH
C926 47p CH
R911 100
R912 100
R917 100
R918 100
LND902
GND
J906
LINE2 OUT VIDEO
LINE1 OUT VIDEO
LINE1 IN VIDEO
C936 0.1u
C937 0.1u F
C938 0.1u F
C939 0.1u F
C940 0.1u F
R995 0
R994 0
R993 0
R992 0
R934 10k
CL935
CL936
CL938
CL934
CL945
CL946
CL947
CL948
CN901 26P
1 T CLOSE
2 T OPEN
3 T CLOSE SW
4 T OPEN SW
5 M-GND
6 TRAY14V USR
7 N.C.
8 USR19V
9 UC0M5V USR
10 SW5V
11 GND
12 GND
13 UNREG6
14 UNREG6
15 UNREG6
16 UNREG6
17 GND
18 GND
19 UN3.1V USR
20 AUDIO GND
21 USR-5V
22 VIDEO-5V
23 AUDIO-5V
24 AUDIO-10V
25 POWER CONT
26 N.C.
30-3
30-4
A.HP5V
A.GND.L
UNSW.6V
SW.5V
MT_GND
MT_14V
31-1
S.GND
UNSW.3.1V
UNSW.6V
LANC.5V
A.PS_GND
A.-10V
A.-6V
UNSW.3.1V
A.+6V
A.+10V
B1 SW -5V
UNSW.6V
SW.5V
UNSW5V
22
31
25
1
34
TO VA-99 BOARD(6/6) (SEE PAGE 4-87)
TO VA-99 BOARD(4/6) (SEE PAGE 4-80)
TO PS-348/395 BOARD CN007 (SEE PAGE 4-143)
TO VA-99 BOARD(6/6) (SEE PAGE 4-87)
TO VA-99 BOARD(4/6) (SEE PAGE 4-82)
TO VA-99 BOARD(1/6) (SEE PAGE 4-67)
TO VA-99 BOARD(2/6) (SEE PAGE 4-72)
SIG
REC
PB


19
20
21
4-1
4-3
4-2
4-4
L1
R901 75
R928 0
R903 75
R929 75
EE
14-1
14-3
14-5
14-2
14-4
14-6
S_GND
L2
LND903
GND
4
TO
VA-99 BOARD(1/6)
(SEE PAGE 4-67)
14
TO
VA-99 BOARD(2/6)
(SEE PAGE 4-75)
(SEE PAGE 4-87)
32-1
32
TO
VA-99 BOARD(6/6)
21
TO
VA-99 BOARD(3/6)
(SEE PAGE 4-77)

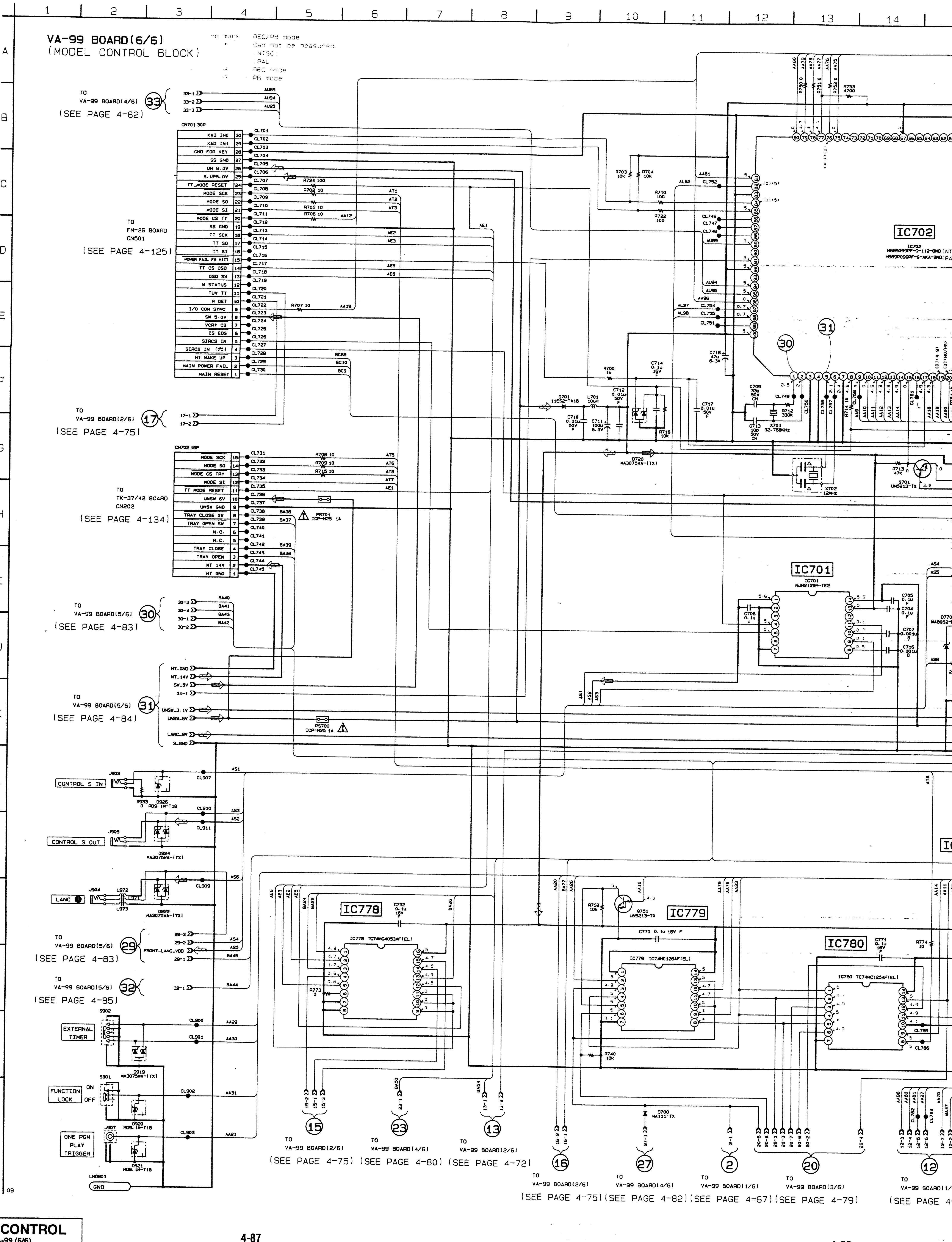
• SIGNAL PATH

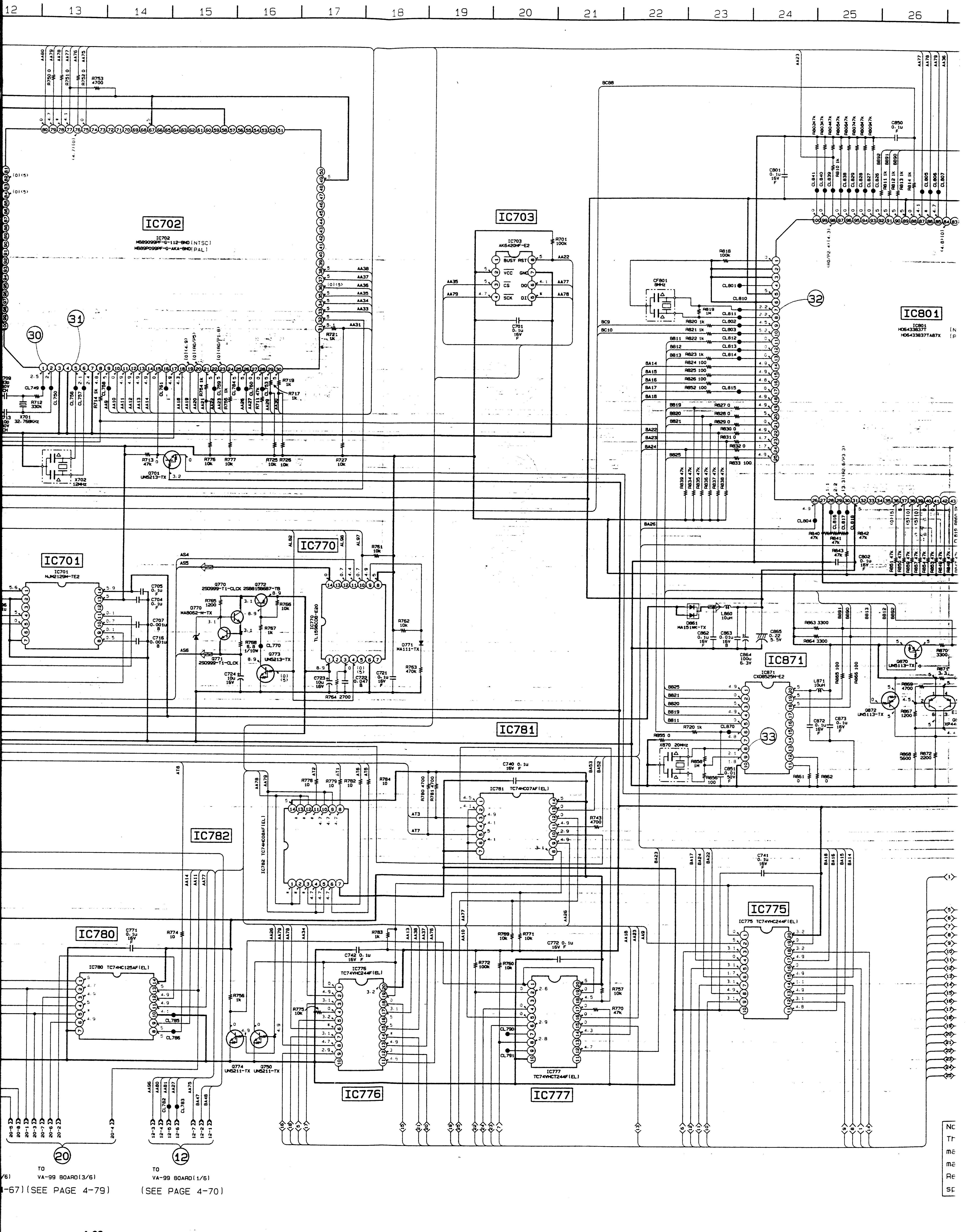
	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡	➡»	➡»»	➡
PB	⇨	⇨»	⇨»»	⇨

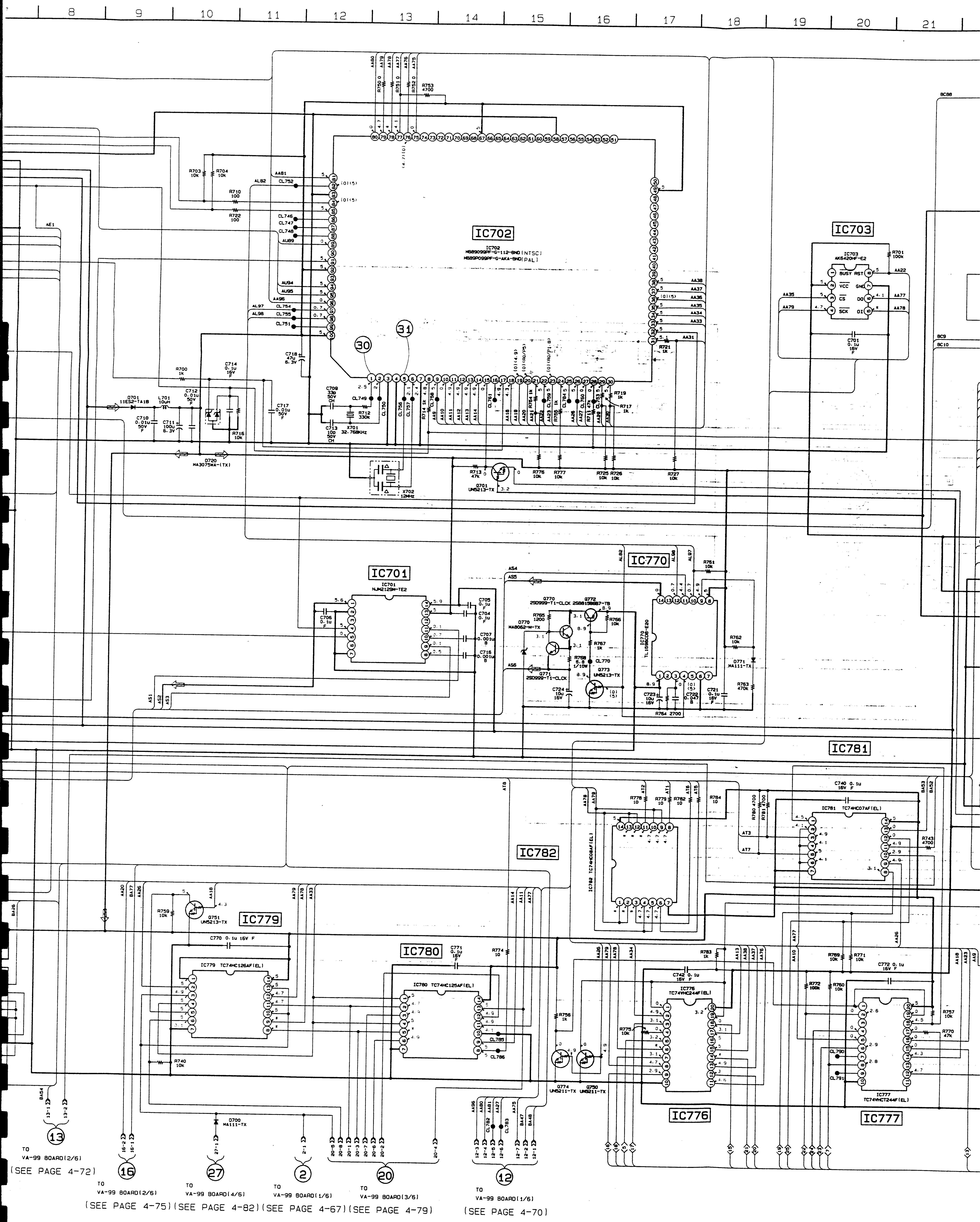
VA-99 (MODE CONTROL) SCHEMATIC DIAGRAM

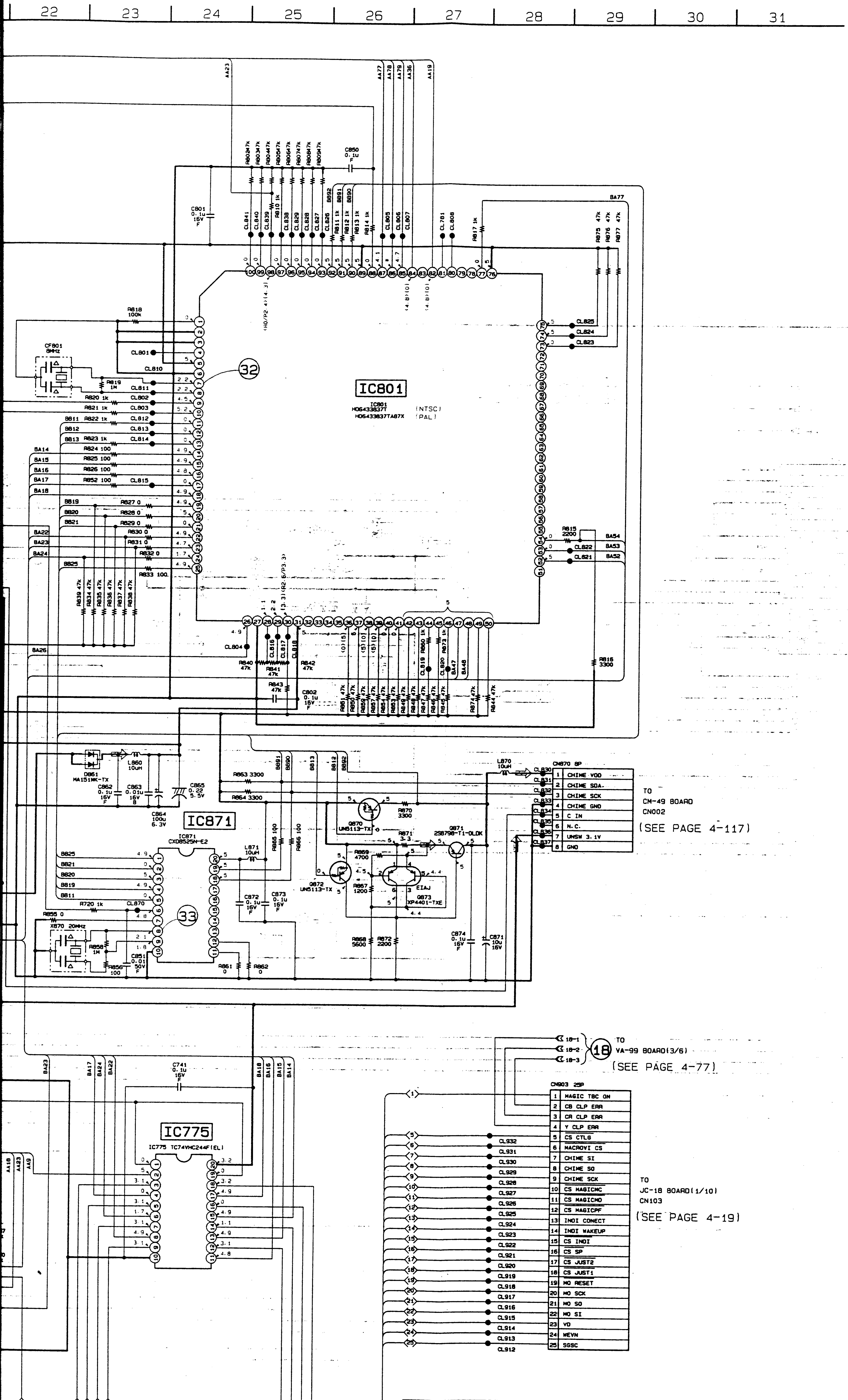
– Ref No. VA-99 BOARD: 3,000 series –

• Refer to page 4-62 for Printed Wiring Board.


VA-99 BOARD(6/6)
(MODEL CONTROL BLOCK)
no mark : REC/PB mode
Can not be measured.
NTSC
PAL
REC mode
PB mode
TO VA-99 BOARD(4/6) (SEE PAGE 4-82)
CN701 30P
KAO IN0
KAO IN1
GND FOR KEY
SS GND
UN 6.0V
8.UP5.0V
TT_MODE RESET
MODE SCK
MODE SO
MODE SI
MODE CS TT
SS GND
TT SCK
TT SO
TT SI
POWER FAIL FM HITT
TT CS OSD
OSD SW
M STATUS
TUV TT
H DET
I/O COM SYNC
SW 5.0V
VCR+ CS
CS EOS
SIRCS IN
SIRCS IN (7C)
HI WAKE UP
MAIN POWER FAIL
MAIN RESET
TO FM-26 BOARD CN501 (SEE PAGE 4-125)
TO VA-99 BOARD(2/6) (SEE PAGE 4-75)
CN702 15P
MODE SCK
MODE SO
MODE CS TRY
MODE SI
TT MODE RESET
UNSW 6V
UNSW GND
TRAY CLOSE SW
TRAY OPEN SW
N.C.
TRAY CLOSE
TRAY OPEN
MT 14V
MT GND
TO TK-37/42 BOARD CN202 (SEE PAGE 4-134)
PS701 ICP-N25 1A
TO VA-99 BOARD(5/6) (SEE PAGE 4-83)
TO VA-99 BOARD(5/6) (SEE PAGE 4-84)
PS700 ICP-N25 1A
CONTROL S IN
CONTROL S OUT
LANC
TO VA-99 BOARD(5/6) (SEE PAGE 4-83)
FRONT_LANC_VDD
TO VA-99 BOARD(5/6) (SEE PAGE 4-85)
EXTERNAL TIMER
FUNCTION LOCK ON OFF
ONE PGM PLAY TRIGGER
GND
IC702
IC702 MB89099PF-G-112-BND(NT
MB89P099PF-G-AKA-BND(PA
IC701
IC701 NJM2129M-TE2
X701 32.768KHz
X702 12MHz
IC778
IC778 TC74HC4053AF(EL)
IC779
IC779 TC74HC126AF(EL)
IC780
IC780 TC74HC125AF(EL)
TO VA-99 BOARD(2/6) (SEE PAGE 4-75)
TO VA-99 BOARD(4/6) (SEE PAGE 4-80)
TO VA-99 BOARD(2/6) (SEE PAGE 4-72)
TO VA-99 BOARD(2/6) (SEE PAGE 4-75)
TO VA-99 BOARD(4/6) (SEE PAGE 4-82)
TO VA-99 BOARD(1/6) (SEE PAGE 4-67)
TO VA-99 BOARD(3/6) (SEE PAGE 4-79)
TO VA-99 BOARD(1/
09

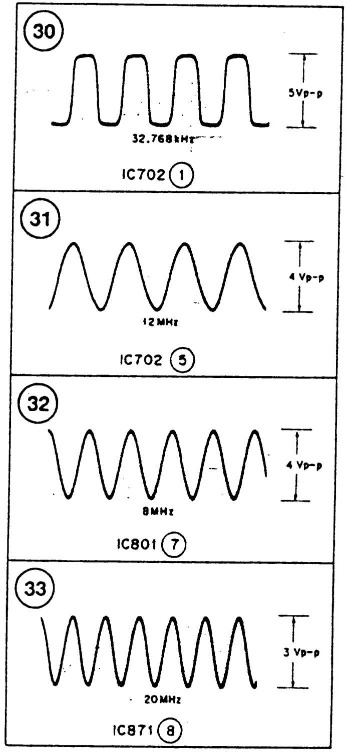

IC702
IC702 MB89099PF-G-112-BND (NTSC)
MB89P099PF-G-AKA-BND (PAL)
IC703
IC703 AK6420HF-E2
IC801
IC801 HD6433837T
HD6433837TA87X
IC701
IC701 NJM2129M-TE2
IC770
IC770 TL1593CQ-E20
IC781
IC781 TC74HC07AF(EL)
IC782
IC782 TC74HC08AF(EL)
IC871
IC871 CXD8525M-E2
IC780
IC780 TC74HC125AF(EL)
IC776
IC776 TC74VHC244F(EL)
IC777
IC777 TC74VHCT244F(EL)
IC775
IC775 TC74VHC244F(EL)
X701 32.768KHz
X702 12MHz
CF801 8MHz
X870 20MHz
Q701 UN5213-TX
Q770 2SD999-T1-CLCK
Q772 2SB1580687-TB
Q771 2SD999-T1-CLCK
Q773 UN5213-TX
Q774 UN5211-TX
Q750 UN5211-TX
Q870 UN5113-TX
Q872 UN5113-TX
D770 MA8062-M-TX
D771 MA111-TX
D861 MA151WK-TX
(30)
(31)
(32)
(33)
(20)
(12)
TO VA-99 BOARD(3/6)
(SEE PAGE 4-79)
TO VA-99 BOARD(1/6)
(SEE PAGE 4-70)


8
9
10
11
12
13
14
15
16
17
18
19
20
21
IC702
IC702 MB89099PF-G-112-BND (NTSC)
MB89P099PF-G-AKA-BND (PAL)
IC703
IC703 AK6420HF-E2
IC701
IC701 NJM2129M-TE2
IC770
IC781
IC781 TC74HC07AF(EL)
IC782
IC782 TC74HC08AF(EL)
IC779
IC779 TC74HC126AF(EL)
IC780
IC780 TC74HC125AF(EL)
IC776
IC776 TC74VHC244F(EL)
IC777
IC777 TC74VHCT244F(EL)
X701 32.768kHz
X702 12MHz
D701 11ES2-TA1B
D720 MA3075WA-(TX)
Q701 UN5213-TX
Q770 2SD999-T1-CLCK
Q771 2SD999-T1-CLCK
Q772 2SB1198B7-TB
Q773 UN5213-TX
Q751 UN5213-TX
Q774 UN5211-TX
Q750 UN5211-TX
D700 MA111-TX
D771 MA111-TX
D770 MA8062-M-TX
⑬
TO VA-99 BOARD(2/6) (SEE PAGE 4-72)
⑯
TO VA-99 BOARD(2/6) (SEE PAGE 4-75)
㉗
TO VA-99 BOARD(4/6) (SEE PAGE 4-82)
②
TO VA-99 BOARD(1/6) (SEE PAGE 4-67)
⑳
TO VA-99 BOARD(3/6) (SEE PAGE 4-79)
⑫
TO VA-99 BOARD(1/6) (SEE PAGE 4-70)


22
23
24
25
26
27
28
29
30
31
IC801
HD6433837T (NTSC)
HD6433837TA87X (PAL)
CF801 8MHz
IC871
CXD8525N-E2
X870 20MHz
IC775
IC775 TC74VHC244F(EL)
Q870 UN5113-TX
Q871 2SB798-T1-DLDK
Q872 UN5113-TX
Q873 XP4401-TXE
D861 MA151WK-TX
L860 10uH
L870 10uH
L871 10uH
CN870 8P
1 CHIME VDD
2 CHIME SDA
3 CHIME SCK
4 CHIME GND
5 C IN
6 N.C.
7 UNSW 3.1V
8 GND
TO
CM-49 BOARD
CN002
(SEE PAGE 4-117)
18-1
18-2
18-3
18
TO
VA-99 BOARD(3/6)
(SEE PAGE 4-77)
CN903 25P
1 MAGIC TBC ON
2 CB CLP ERR
3 CR CLP ERR
4 Y CLP ERR
5 CS CTLG
6 MACROVI CS
7 CHIME SI
8 CHIME SO
9 CHIME SCK
10 CS MAGICMC
11 CS MAGICMO
12 CS MAGICPF
13 INDI CONECT
14 INDI WAKEUP
15 CS INDI
16 CS SP
17 CS JUST2
18 CS JUST1
19 MO RESET
20 MO SCK
21 MO SO
22 MO SI
23 VD
24 WEVN
25 SGSC
TO
JC-18 BOARD(1/10)
CN103
(SEE PAGE 4-19)
32
33

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

VA-99 BOARD(6/6)REC/PB

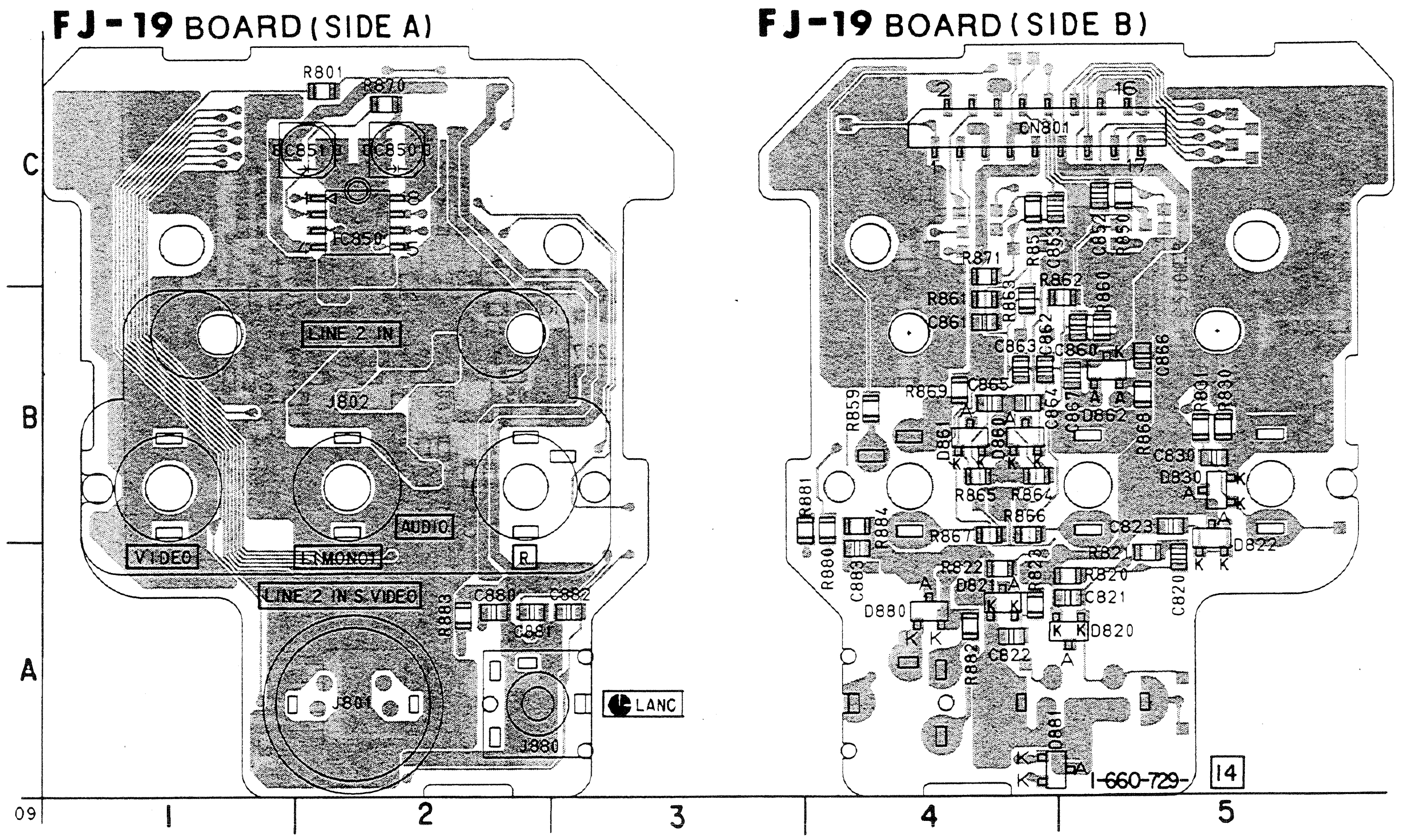


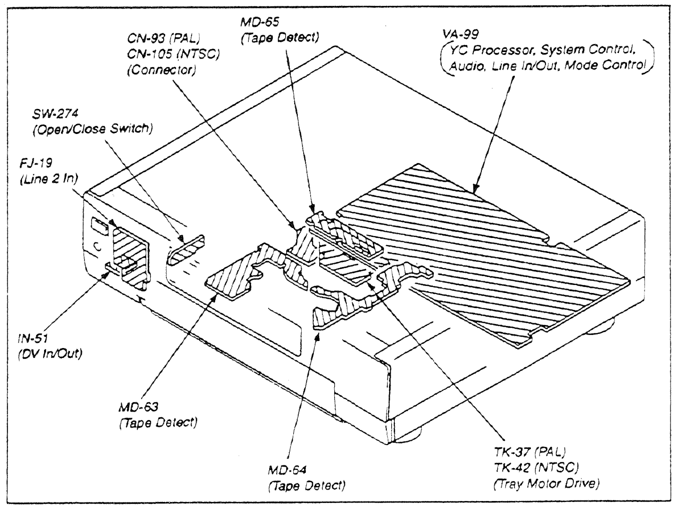
FJ-19 (LINE 2 IN) PRINTED WIRING BOARD

– Ref No. FJ-19 BOARD: 5,000 series –

• For Printed Wiring Boards.

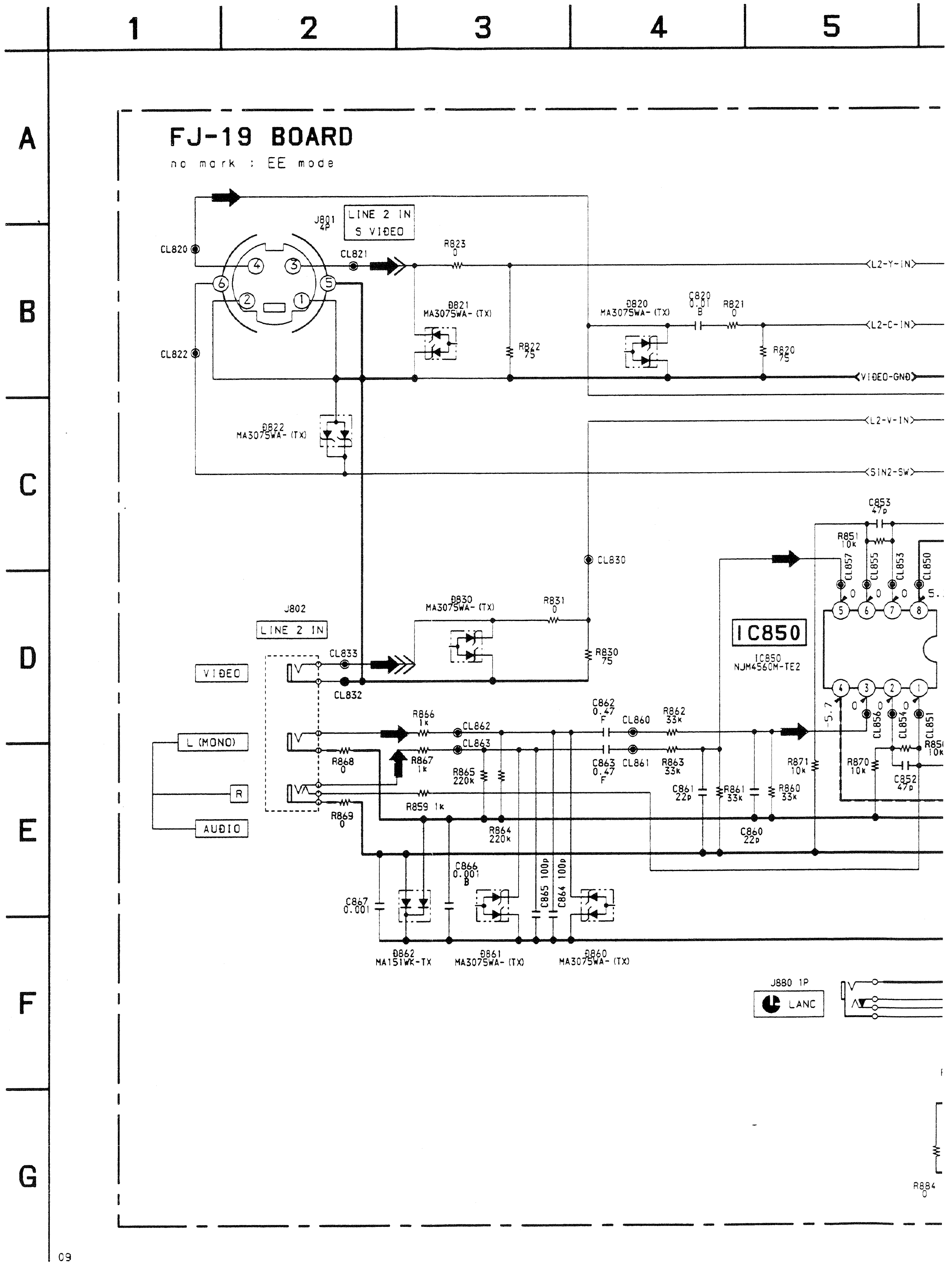
> There are few cases that the part isn't mounted in this model is printed on this diagram.

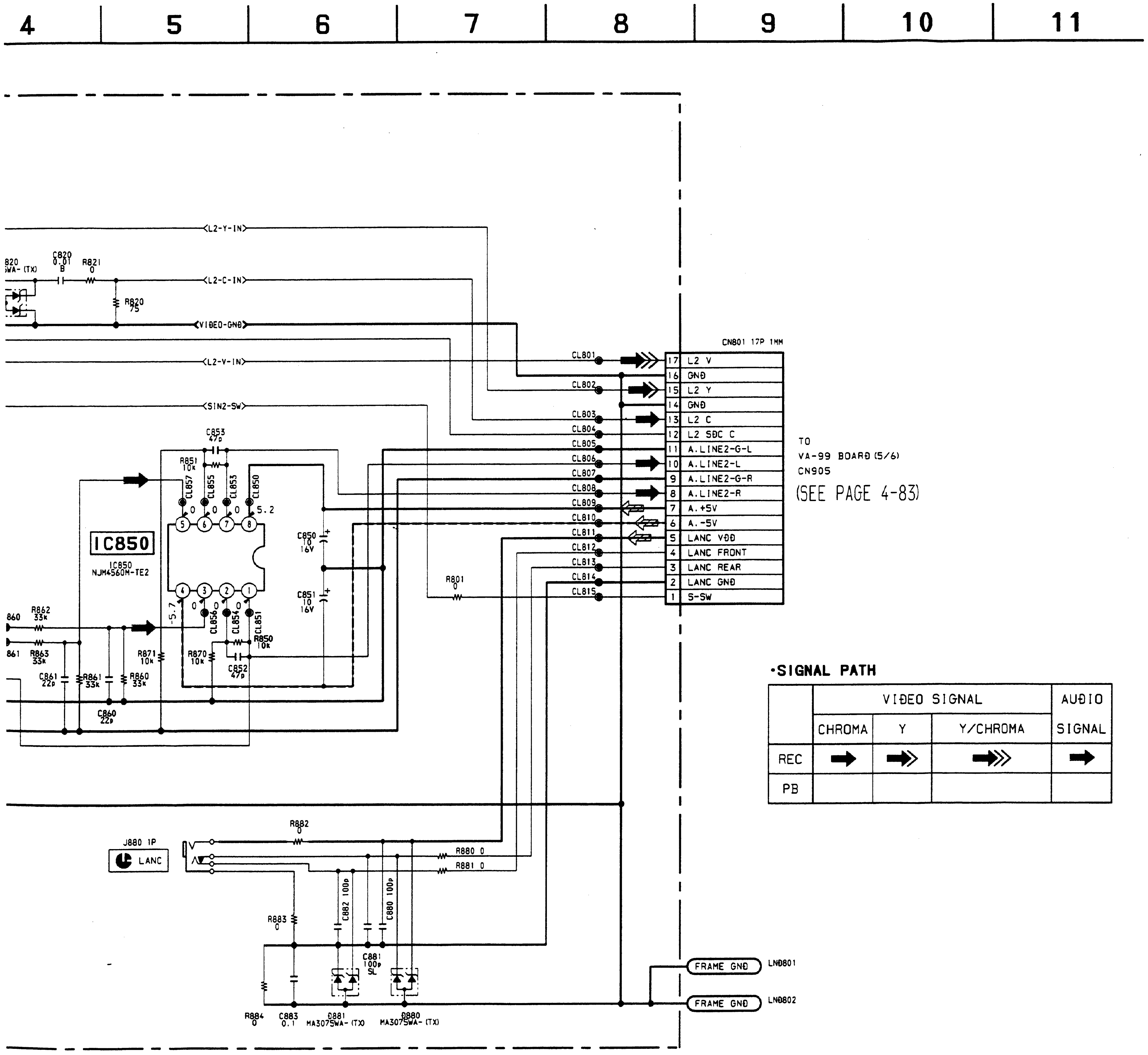

FJ-19 BOARD (SIDE A)
FJ-19 BOARD (SIDE B)
C
B
A
09
1
2
3
4
5
R801
R820
C851
C850
IC850
LINE 2 IN
J802
VIDEO
L(MONO)
AUDIO
R
LINE 2 IN S VIDEO
C880
C882
C881
R883
J801
J880
LANC
CN801
2
16
1
15
R871
R862
R861
C861
C863
C860
C862
C865
R863
R859
R866
R865
R864
R867
R884
R881
R880
C883
D880
R822
D821
R823
R821
R830
R831
C830
D830
C823
D822
R882
C822
C821
D820
C820
D881
C852
R851
R850
R860
R868
C866
C864
D860
D861
D862
C867
R869
1-660-729-
14


MD-65
(Tape Detect)
CN-93 (PAL)
CN-105 (NTSC)
(Connector)
VA-99
(Y/C Processor, System Control,
Audio, Line In/Out, Mode Control)
SW-274
(Open/Close Switch)
FJ-19
(Line 2 In)
IN-51
(DV In/Out)
MD-63
(Tape Detect)
MD-64
(Tape Detect)
TK-37 (PAL)
TK-42 (NTSC)
(Tray Motor Drive)

FJ-19 (LINE 2 IN) SCHEMATIC DIAGRAM

– Ref No. FJ-19 BOARD: 5,000 series –

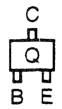

1
2
3
4
5
A
B
C
D
E
F
G
FJ-19 BOARD
no mark : EE mode
J801 4P
LINE 2 IN
S VIDEO
CL820
CL821
CL822
R823 0
D821 MA3075WA-(TX)
R822 75
D820 MA3075WA-(TX)
C820 0.01 B
R821 0
R820 75
L2-Y-IN
L2-C-IN
VIDEO-GND
L2-V-IN
SIN2-SW
D822 MA3075WA-(TX)
CL830
J802
LINE 2 IN
D830 MA3075WA-(TX)
R831 0
R830 75
CL833
CL832
VIDEO
L (MONO)
R
AUDIO
R866 1k
R868 0
R867 1k
CL862
CL863
R865 220k
R859 1k
R869 0
R864 220k
C862 0.47 F
CL860
R862 33k
C863 0.47 F
CL861
R863 33k
C861 22p
R861 33k
R860 33k
C860 22p
R871 10k
R870 10k
C852 47p
C853 47p
R851 10k
CL857
CL855
CL853
CL850
CL856
CL854
CL851
IC850
IC850 NJM4560M-TE2
C866 0.001 B
C867 0.001
C865 100p
C864 100p
D862 MA151WK-TX
D861 MA3075WA-(TX)
D860 MA3075WA-(TX)
J880 1P
LANC
R884 0
09


4
5
6
7
8
9
10
11
<L2-Y-IN>
<L2-C-IN>
<VIDEO-GND>
<L2-V-IN>
<SIN2-SW>
C820 0.01 B
R821 0
R820 75
CN801 17P 1MM
17 L2 V
16 GND
15 L2 Y
14 GND
13 L2 C
12 L2 SDC C
11 A.LINE2-G-L
10 A.LINE2-L
9 A.LINE2-G-R
8 A.LINE2-R
7 A.+5V
6 A.-5V
5 LANC VDD
4 LANC FRONT
3 LANC REAR
2 LANC GND
1 S-SW
CL801
CL802
CL803
CL804
CL805
CL806
CL807
CL808
CL809
CL810
CL811
CL812
CL813
CL814
CL815
TO
VA-99 BOARD (5/6)
CN905
(SEE PAGE 4-83)
IC850
IC850 NJM4560M-TE2
C853 47p
R851 10k
CL857
CL855
CL853
CL850
5.2
-5.7
CL856
CL854
CL851
R850 10k
C852 47p
R870 10k
R871 10k
C850 10 16V
C851 10 16V
R801 0
R862 33k
R863 33k
C861 22p
R861 33k
R860 33k
C860 22p
J880 1P
LANC
R882 0
R880 0
R881 0
R883 0
C882 100p
C880 100p
C881 100p SL
R884 0
C883 0.1
D881 MA3075WA-(TX)
D880 MA3075WA-(TX)
FRAME GND
LND801
FRAME GND
LND802

·SIGNAL PATH

	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	SIGNAL
REC	➡	➡»	➡»»	➡
PB				

- **For Printed Wiring Boards.**
- Chip transistor

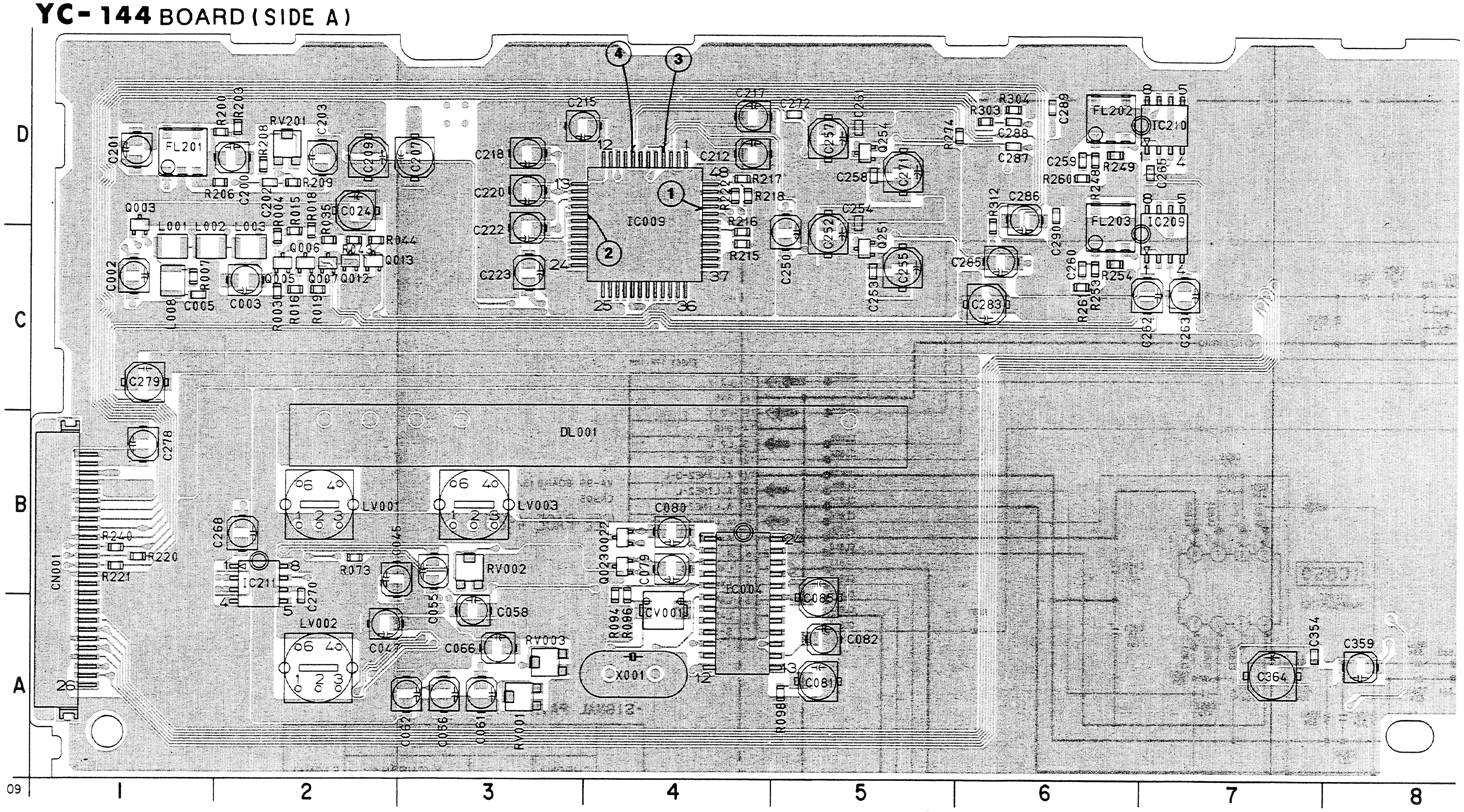


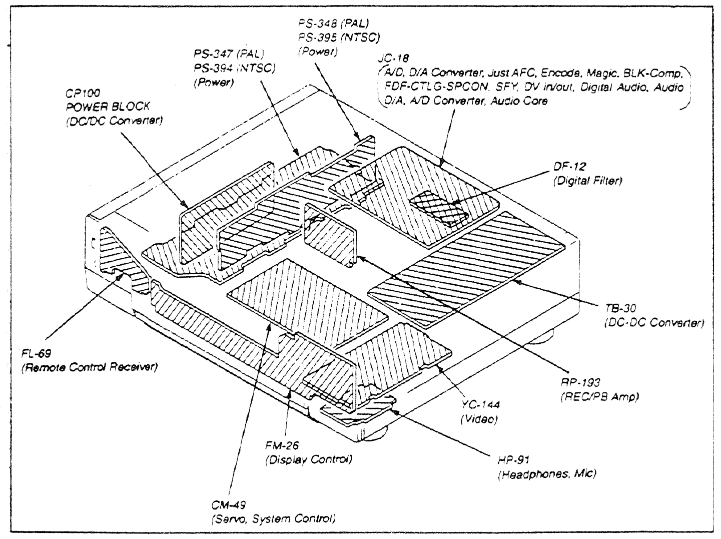
YC-144 (VIDEO) PRINTED WIRING BOARD

– Ref No. YC-144 BOARD: 4,000 series –

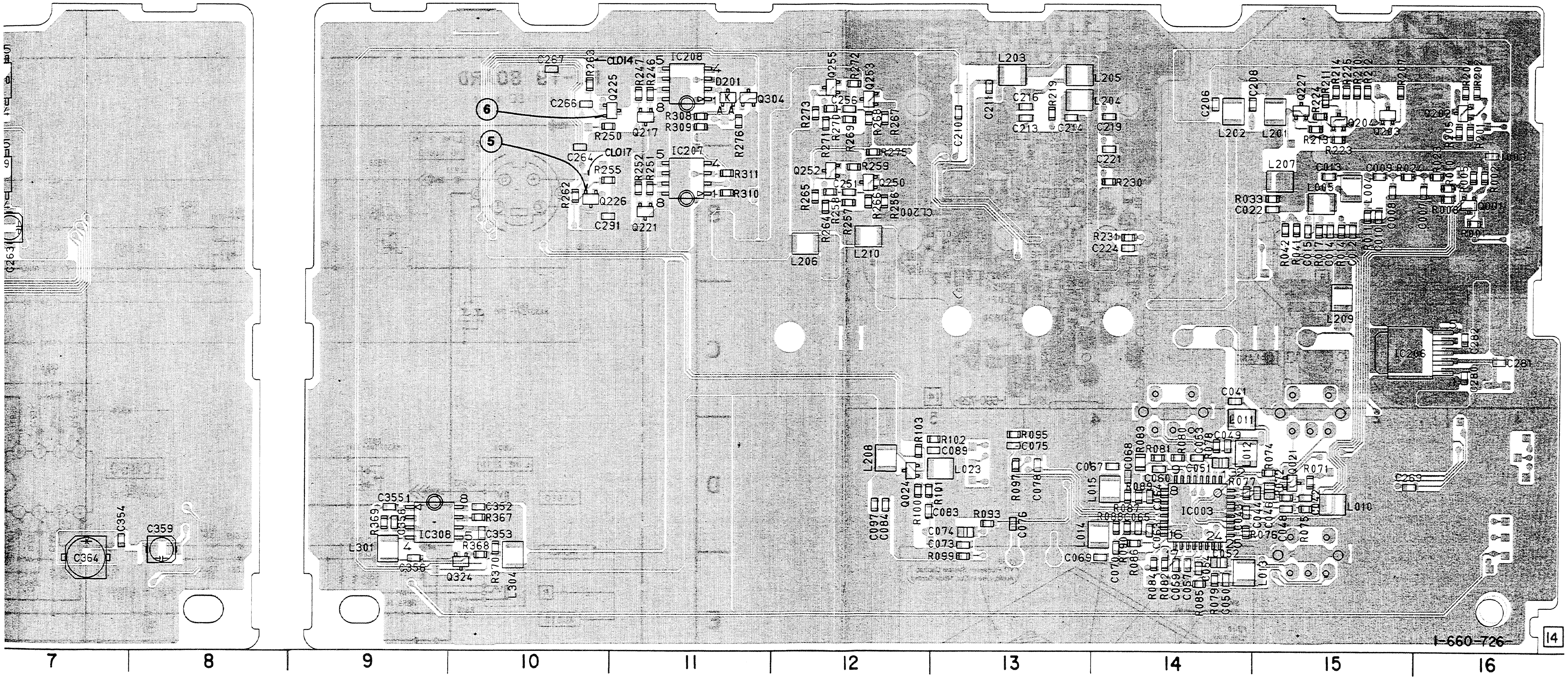
There are few cases that the part isn't mounted in this model is printed on this diagram.

YC-144 BOARD	
CN001	B-1
D201	D-11
IC009	D-4
IC206	B-16
IC207	D-11
IC208	D-11
IC308	A-9
Q202	D-16
Q203	D-15
Q204	D-15
Q217	D-11
Q221	C-11
Q225	D-11
Q226	C-10
Q227	D-15
Q250	C-12
Q251	C-5
Q252	C-12
Q253	D-12
Q254	D-5
Q255	D-12
Q304	D-11
Q324	A-10


YC-144 BOARD (SIDE A)
D
C
B
A
09
1
2
3
4
5
6
7
8
①
②
③
④
IC009
IC004
IC209
IC210
IC211
FL201
FL202
FL203
DL001
LV001
LV002
LV003
RV001
RV002
RV003
RV201
CN001
X001
CV001
Q003
L001
L002
L003
C201
C002
C005
C003
C202
C203
C207
C209
C215
C217
C218
C220
C222
C223
C212
C272
C257
C258
C254
C252
C250
C255
C259
C271
C286
C287
C288
C289
C290
C260
C262
C263
C265
C283
C285
C279
C278
C268
C270
C080
C079
C058
C066
C047
C055
C085
C082
C081
C052
C056
C061
C354
C359
C364
R200
R203
R206
R208
R209
R215
R216
R217
R218
R240
R220
R221
R073
R094
R086
R098
R249
R254
R260
R274
R303
R304
R312
1
12
13
24
25
26
36
37
48


PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
(A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core)
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

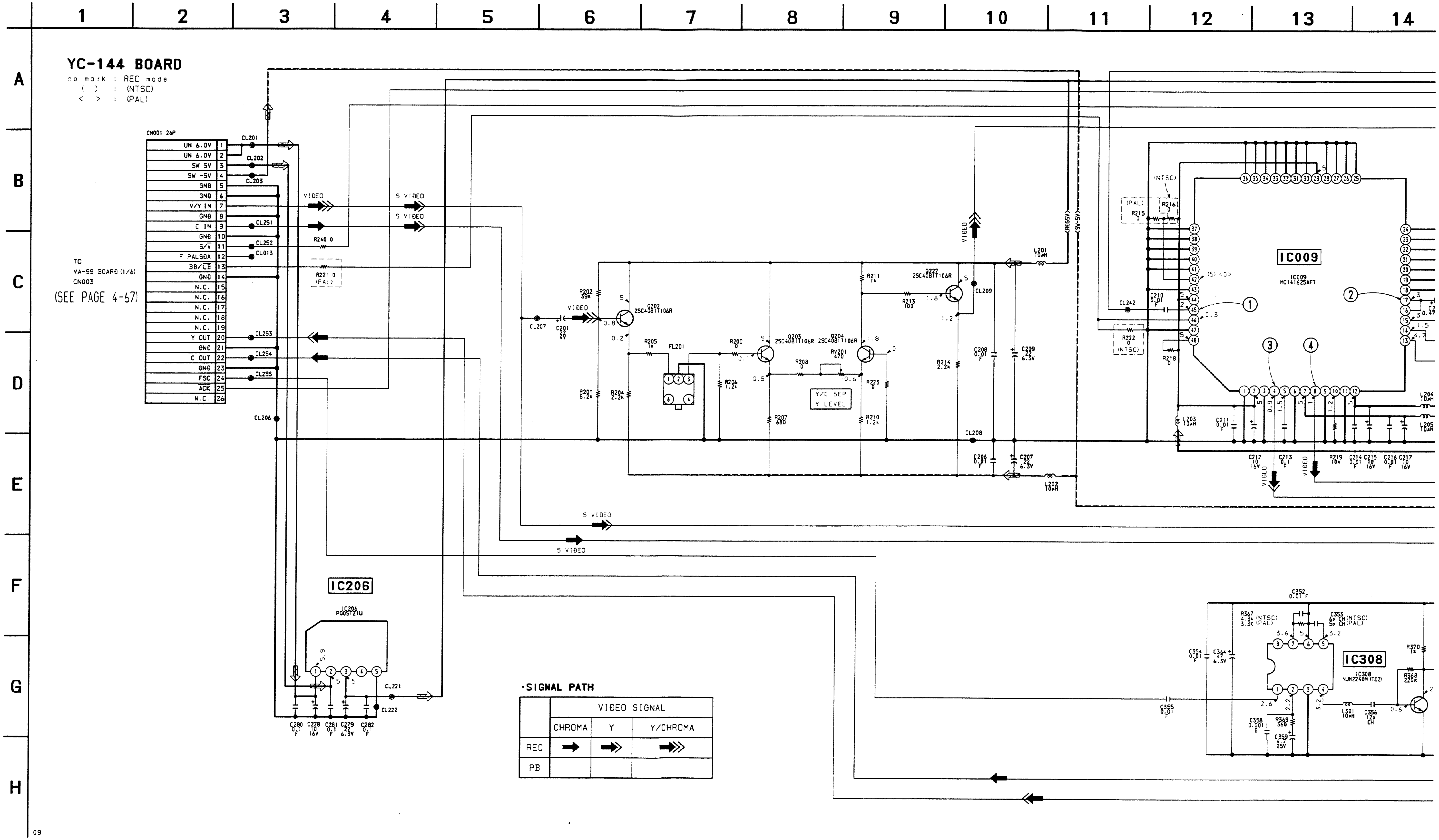
YC-144 BOARD (SIDE B)



IC208
IC207
IC206
IC308
IC003
D201
Q225
Q226
Q217
Q221
Q304
Q255
Q253
Q252
Q250
Q227
Q204
Q203
Q202
Q001
Q024
Q021
Q324
Q263
L203
L205
L204
L202
L201
L207
L005
L206
L210
L209
L208
L023
L015
L014
L013
L012
L011
L010
L301
L304
C364
C359
C354
C355
C356
C352
C353
CL014
CL017
CL200
6
5
1-660-726-
14
7
8
9
10
11
12
13
14
15
16

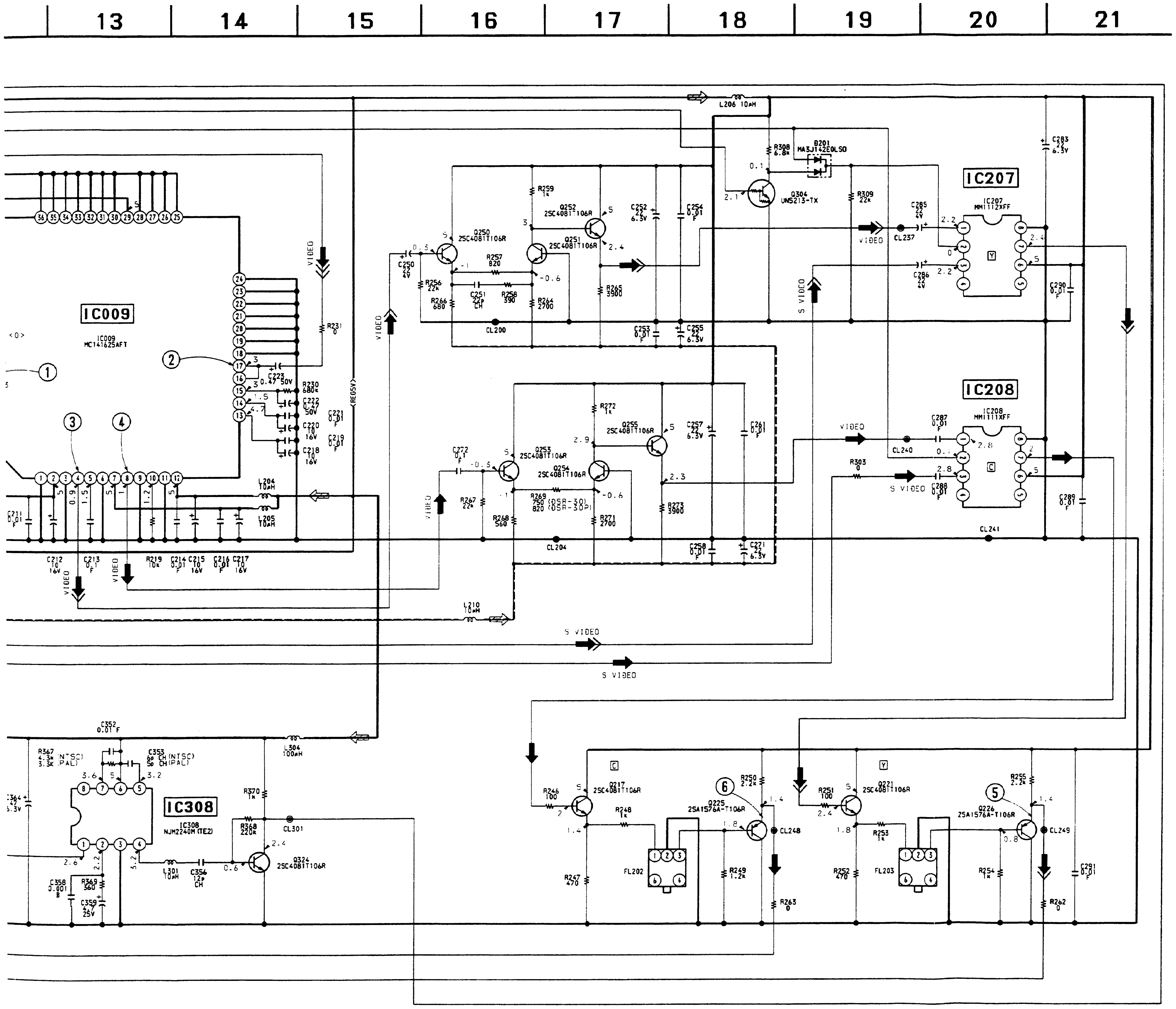
YC-144 (VIDEO) SCHEMATIC DIAGRAM

– Ref No. YC-144 BOARD: 4,000 series –

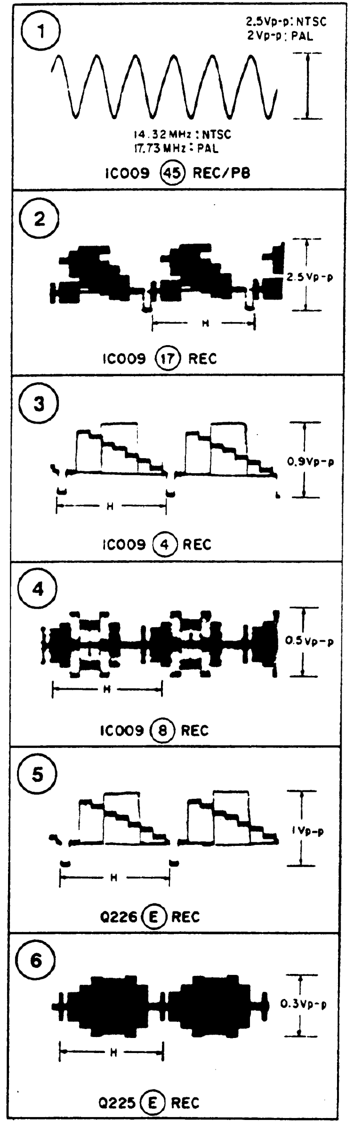

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
YC-144 BOARD
no mark : REC mode
( ) : (NTSC)
< > : (PAL)
CN001 26P
UN 6.0V 1
UN 6.0V 2
SW 5V 3
SW -5V 4
GND 5
GND 6
V/Y IN 7
GND 8
C IN 9
GND 10
S/V 11
F PALSDA 12
BB/LB 13
GND 14
N.C. 15
N.C. 16
N.C. 17
N.C. 18
N.C. 19
Y OUT 20
GND 21
C OUT 22
GND 23
FSC 24
ACK 25
N.C. 26
TO
VA-99 BOARD (1/6)
CN003
(SEE PAGE 4-67)
CL201
CL202
CL203
CL251
CL252
CL013
CL253
CL254
CL255
CL206
VIDEO
S VIDEO
R240 0
R221 0 (PAL)
CL207
C201
R202 39k
Q202 2SC4081T106R
R201 8.2k
R204 2.2k
R205 1k
FL201
R200 0
Q203 2SC4081T106R
Q204 2SC4081T106R
RV201 470
R208 0
R206 1.2k
R207 680
Y/C SEP
Y LEVEL
R211 1k
R213 100
Q227 2SC4081T106R
R223 0
R210 1.2k
R214 2.2k
CL209
C208 0.01 F
C209 22 6.3V
CL208
C206 0.01 F
C207 22 6.3V
L201 10μH
L202 10μH
(REG5V)
(SW-5V)
IC009
IC009 MC141625AFT
(NTSC)
(PAL)
R215 0
R216 0
CL242
C210 0.01 F
R222 0 (NTSC)
R218 0
L203 10μH
C211 0.01
C212 10 16V
C213 0.1 F
R219 10k
C214 0.01 F
C215 10 16V
C216 0.01 F
C217 10 16V
L204 10μH
L205 10μH
①
②
③
④
IC206
IC206 PQ05TZ1U
CL221
CL222
C280 0.1 F
C278 10 16V
C281 0.1 F
C279 47 6.3V
C282 0.1 F
C352 0.01 F
R367 4.3k (NTSC) 3.3k (PAL)
C353 6p CH (NTSC) 5p CH (PAL)
C354 0.01 F
C364 47 6.3V
IC308
IC308 NJM2240M (TE2)
R370 1k
R368 220k
C355 0.01 F
C358 0.001 B
R369 360
C359 4.7 25V
L301 10μH
C356 12p CH
09

·SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡》	➡》》
PB			


13
14
15
16
17
18
19
20
21
IC009
IC009 MC141625AFT
IC207
IC207 MM1112XFF
IC208
IC208 MM1111XFF
IC308
IC308 NJM2240M (TE2)
Q250 2SC4081T106R
Q251 2SC4081T106R
Q252 2SC4081T106R
Q253 2SC4081T106R
Q254 2SC4081T106R
Q255 2SC4081T106R
Q304 UN5213-TX
D201 MA3J142E0LS0
Q217 2SC4081T106R
Q221 2SC4081T106R
Q225 2SA1576A-T106R
Q226 2SA1576A-T106R
Q324 2SC4081T106R
FL202
FL203
L206 10μH
L204 10μH
L205 10μH
L210 10μH
L304 100μH
L301 10μH
CL200
CL204
CL237
CL240
CL241
CL248
CL249
CL301
R269 750 (DSR-30) 820 (DSR-30P)
R367 4.3k (NTSC) 3.3k (PAL)
C353 68 CH (NTSC) 56 CH (PAL)
VIDEO
S VIDEO
(REG5V)
Y
C
①
②
③
④
⑤
⑥

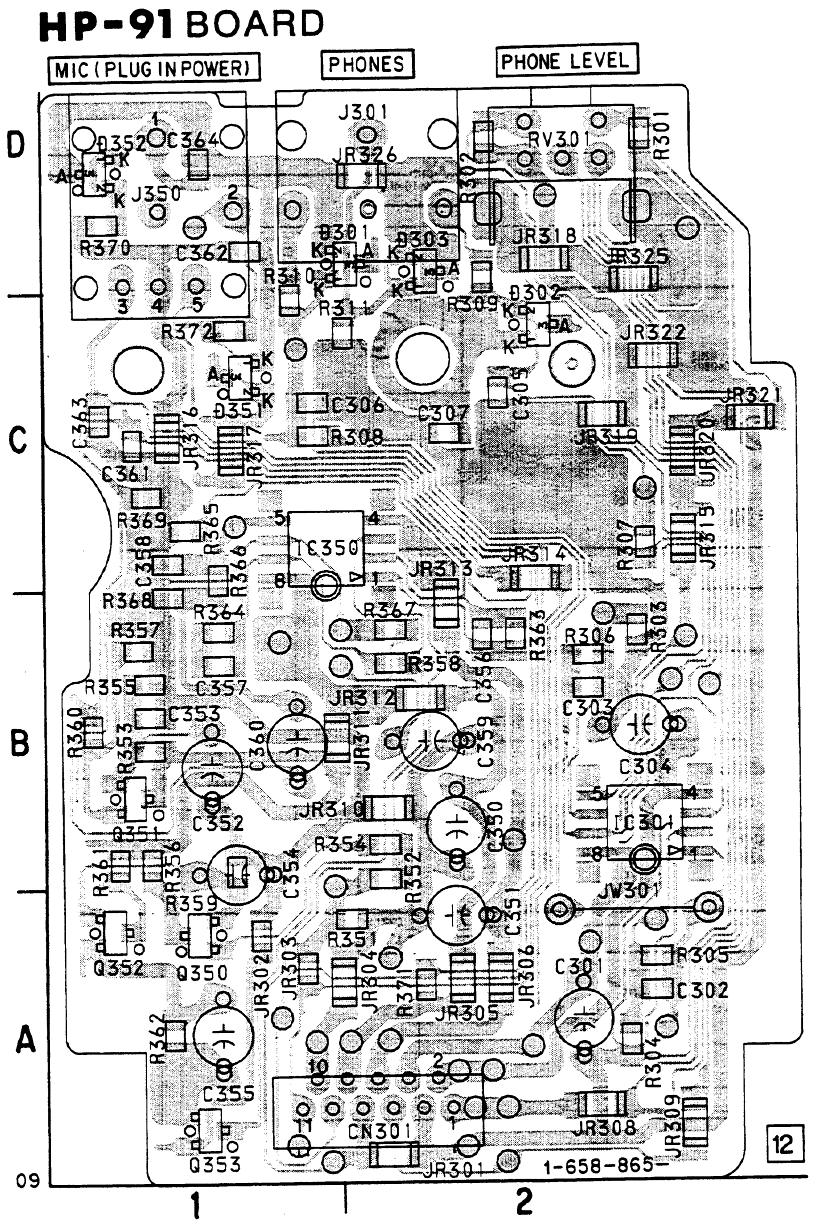
YC-144 BOARD



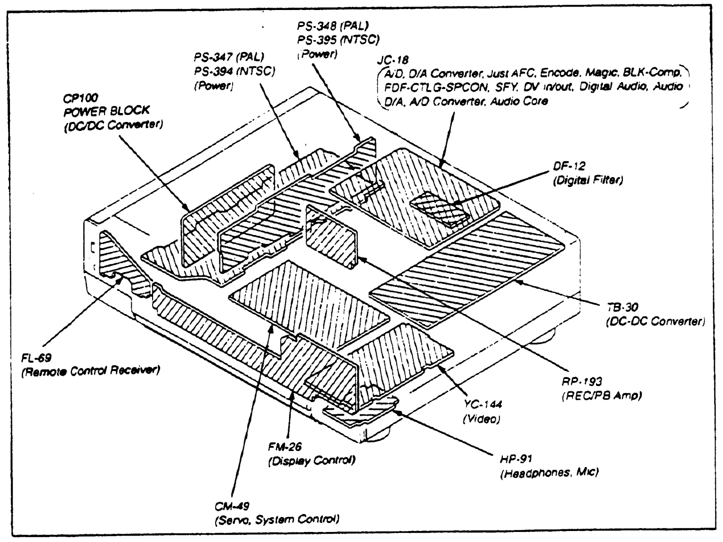
DSR-30: NTSC model
DSR-30P: PAL model

HP-91 (HEADPHONES, MIC) PRINTED WIRING BOARD

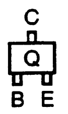
– Ref No. HP-91 BOARD: 5,000 series –


HP-91 BOARD
MIC (PLUG IN POWER)
PHONES
PHONE LEVEL
J301
RV301
J350
CN301
IC350
IC301
Q350
Q351
Q352
Q353
D301
D302
D303
D351
D352
JW301
1-658-865-
12
D
C
B
A
1
2
09

HP-91 BOARD	
CN301	A-2
D301	D-2
D302	C-2
D303	D-2
D351	C-1
D352	D-1
IC301	B-2
IC350	C-1
Q350	A-1
Q351	B-1
Q352	A-1
Q353	A-1


PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
(A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core)
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

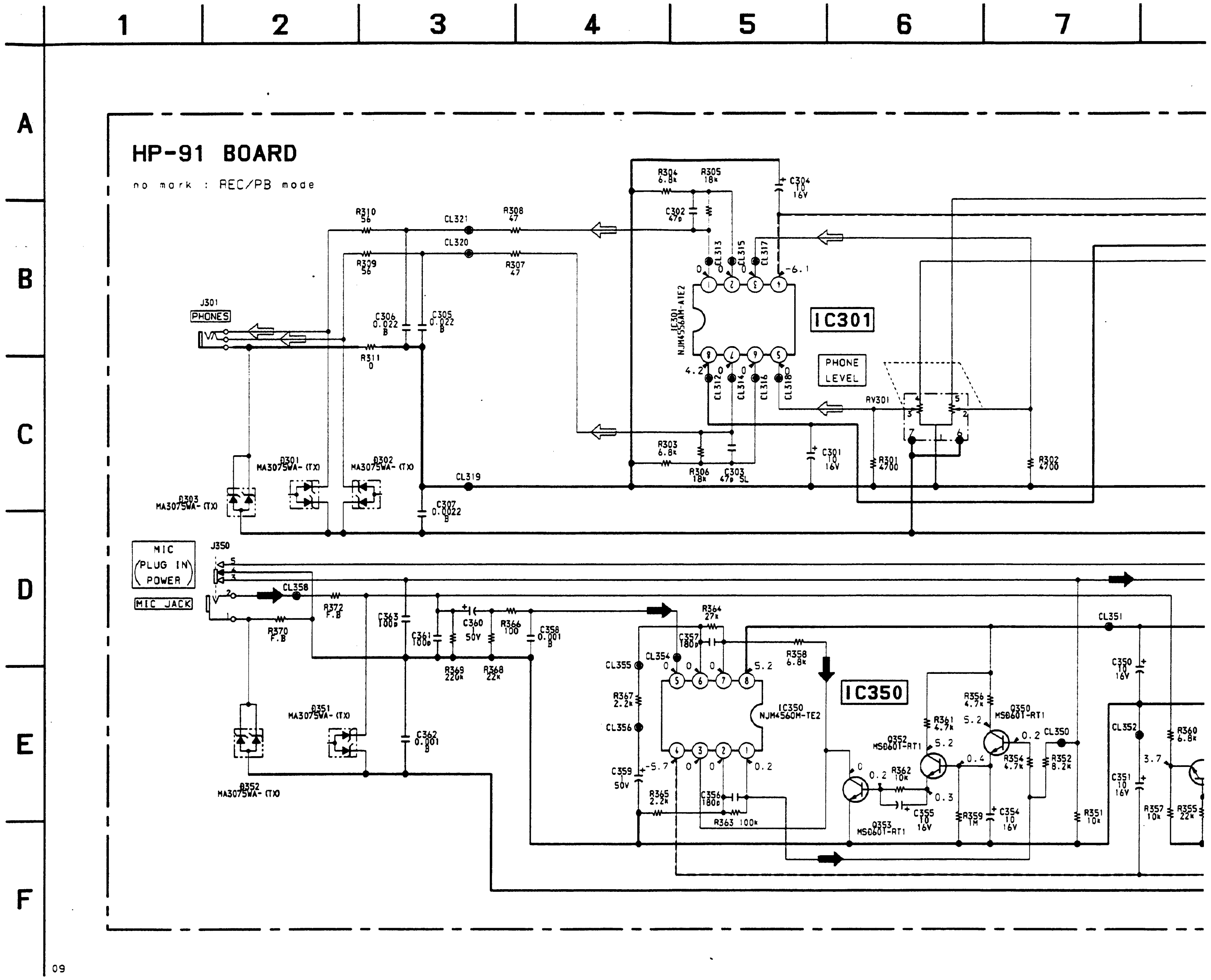
- **For Printed Wiring Boards.**
- Chip transistor



There are few cases that the part isn't mounted in this model is printed on this diagram.

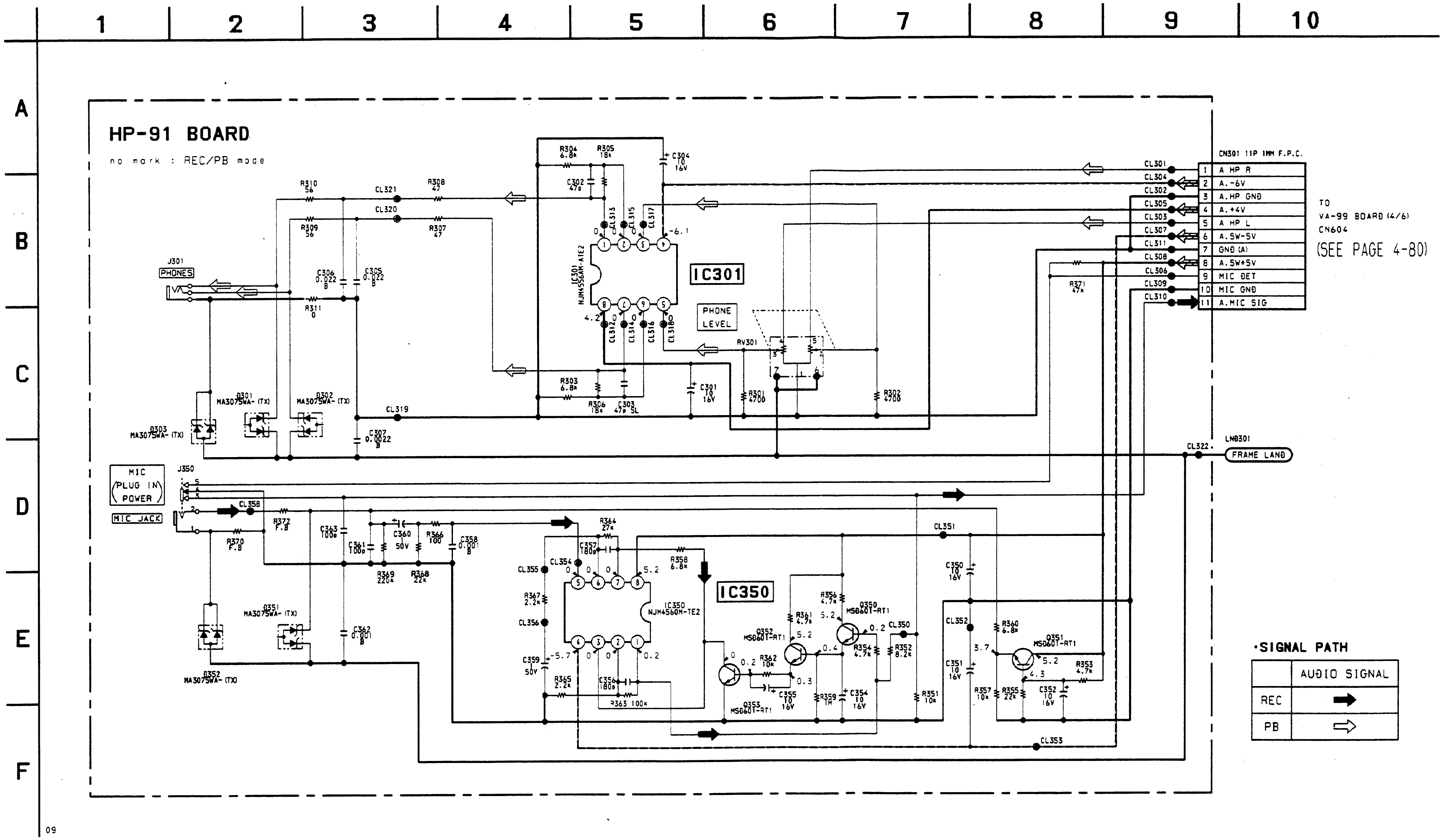
HP-91 (HEADPHONES, MIC) SCHEMATIC DIAGRAM

– Ref No. HP-91 BOARD: 5,000 series –


1
2
3
4
5
6
7
A
B
C
D
E
F
HP-91 BOARD
no mark : REC/PB mode
J301
PHONES
MIC
(PLUG IN)
POWER
MIC JACK
J350
IC301
NJM4556AM-AE2
IC350
NJM4560M-TE2
PHONE LEVEL
RV301
D301
MA3075WA-(TX)
D302
MA3075WA-(TX)
D303
MA3075WA-(TX)
D351
MA3075WA-(TX)
D352
MA3075WA-(TX)
Q350
MSB60T-RT1
Q352
MSD601-RT1
Q353
MSD601-RT1
CL319
CL320
CL321
CL351
CL354
CL355
CL356
CL358
09

HP-91 (HEADPHONES, MIC) SCHEMATIC DIAGRAM

– Ref No. HP-91 BOARD: 5,000 series –


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
HP-91 BOARD
no mark : REC/PB mode
J301
PHONES
R310 56
R309 56
R311 0
CL321
CL320
R308 47
R307 47
C306 0.022 B
C305 0.022 B
R304 6.8k
R305 18k
C304 10 16V
C302 47p
CL313
CL315
CL317
-6.1
IC301
NJM4556AM-A1E2
CL312
CL314
CL316
CL318
PHONE LEVEL
RV301
R303 6.8k
R306 18k
C303 47p SL
C301 10 16V
R301 4700
R302 4700
R371 47k
Q301 MA3075WA-(TX)
Q302 MA3075WA-(TX)
Q303 MA3075WA-(TX)
CL319
C307 0.0022 B
MIC PLUG IN POWER
MIC JACK
J350
CL358
R372 F.B
R370 F.B
C363 100p
C361 100p
C360 50V
R366 100
C358 0.001 B
R369 220k
R368 22k
R364 27k
C357 180p
CL355
CL354
R358 6.8k
IC350
NJM4560M-TE2
R367 2.2k
CL356
C359 50V
R365 2.2k
C356 180p
R363 100k
Q351 MA3075WA-(TX)
Q352 MA3075WA-(TX)
C362 0.001 B
Q352 MS6601T-RT1
Q353 MS6601T-RT1
Q350 MS6601T-RT1
Q351 MS6601T-RT1
R356 4.7k
R361 4.7k
R362 10k
C355 10 16V
R359 1M
C354 10 16V
R354 4.7k
R352 8.2k
CL350
CL351
C350 10 16V
CL352
C351 10 16V
R351 10k
R357 10k
R355 22k
C352 10 16V
R360 6.8k
R353 4.7k
CL353
CL301
CL304
CL302
CL305
CL303
CL307
CL311
CL308
CL306
CL309
CL310
CN301 11P 1MM F.P.C.
1 A HP R
2 A.-6V
3 A.HP GND
4 A.+4V
5 A HP L
6 A.SW-5V
7 GND (A)
8 A.SW+5V
9 MIC DET
10 MIC GND
11 A.MIC SIG
TO
VA-99 BOARD (4/6)
CN604
(SEE PAGE 4-80)
CL322
LN0301
FRAME LAND
09

·SIGNAL PATH

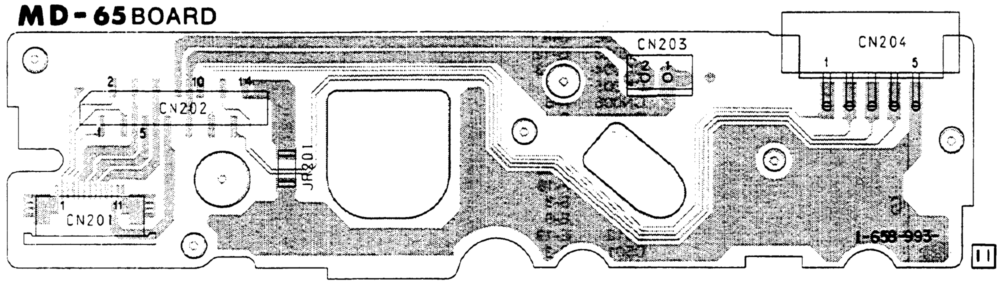
	AUDIO SIGNAL
REC	➡
PB	⇨

n't mounted in this model is

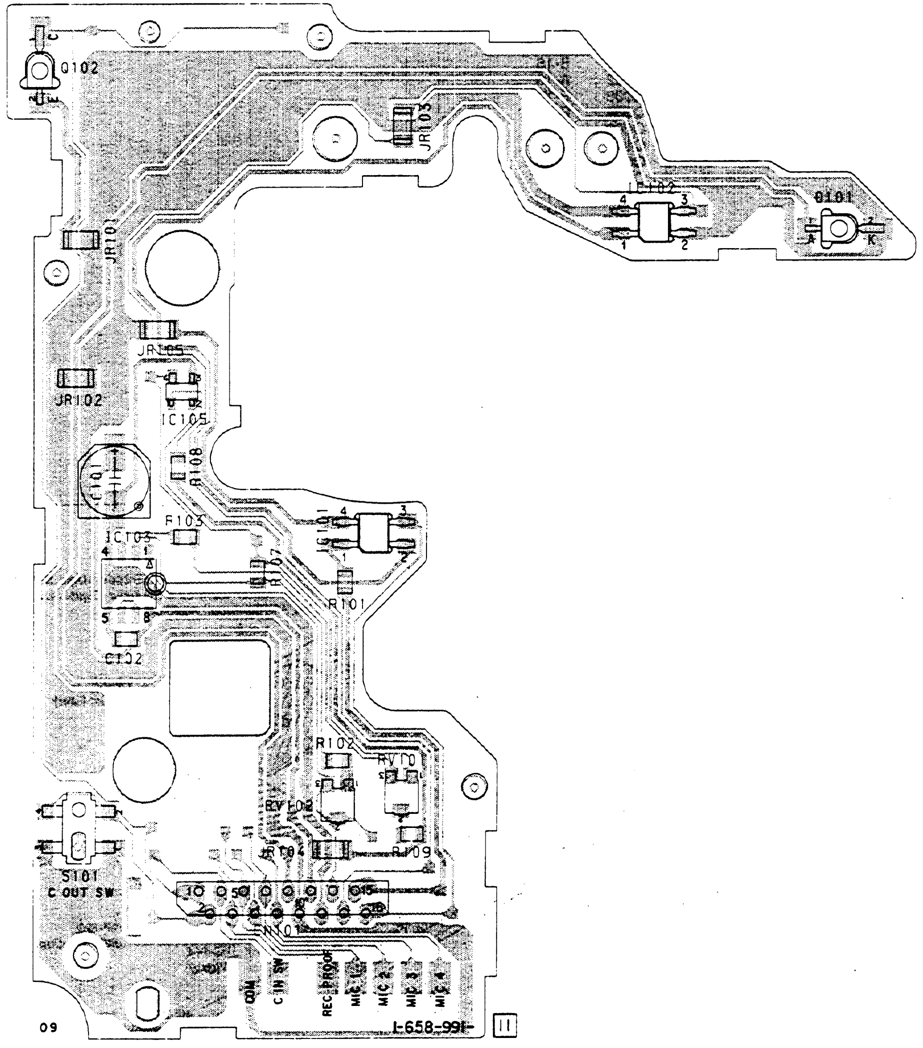
MD-63, MD-64, MD-65 (TAPE DETECT), FP-406 (TAPE SENSOR) PRINTED WIRING BOARDS

– Ref No. MD-63, MD-64, MD-65, FP-406 BOARDS: 7,000 series –

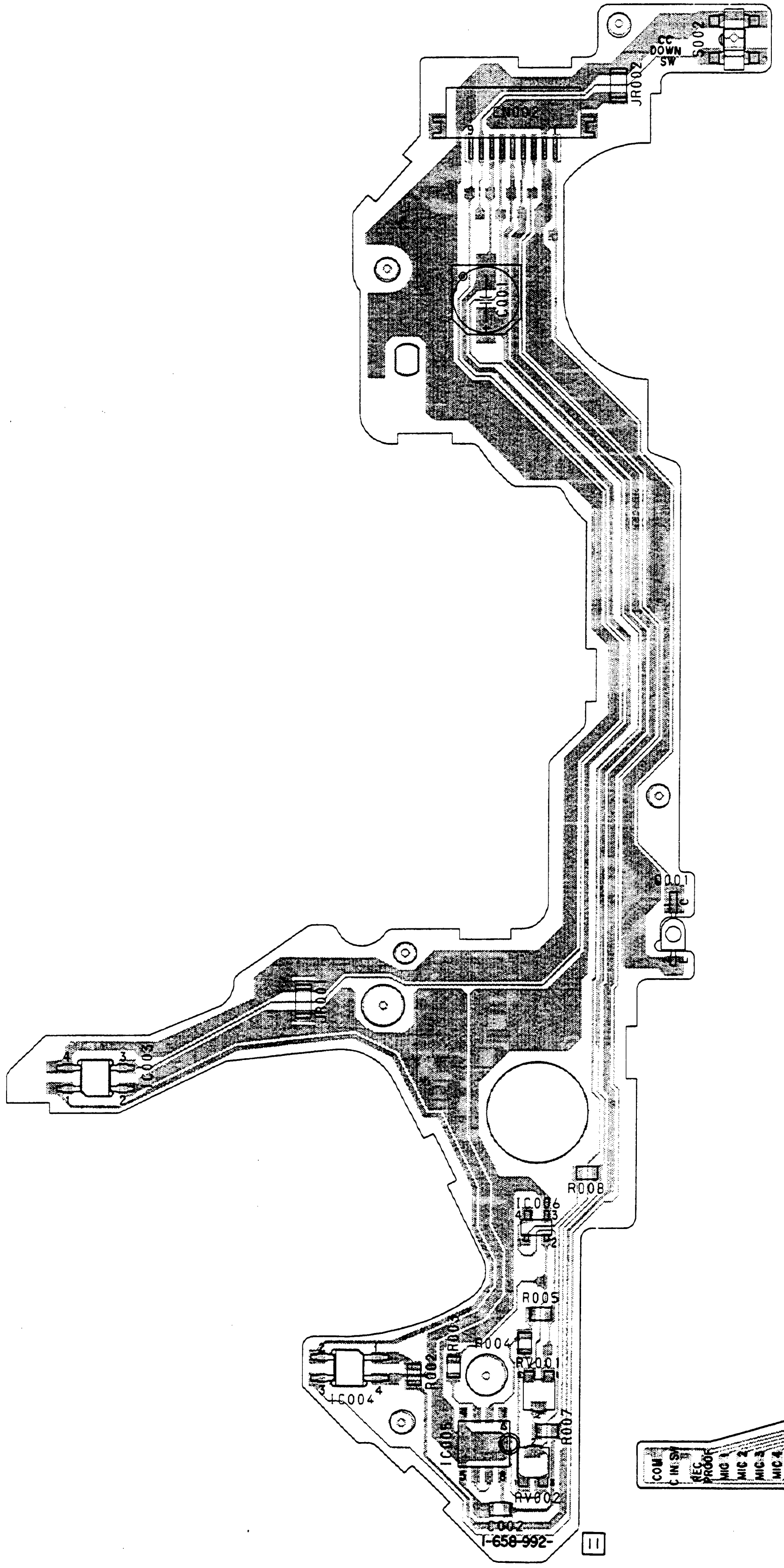
MD-65 BOARD


CN203
CN204
CN202
CN201
JR201
1-658-993-

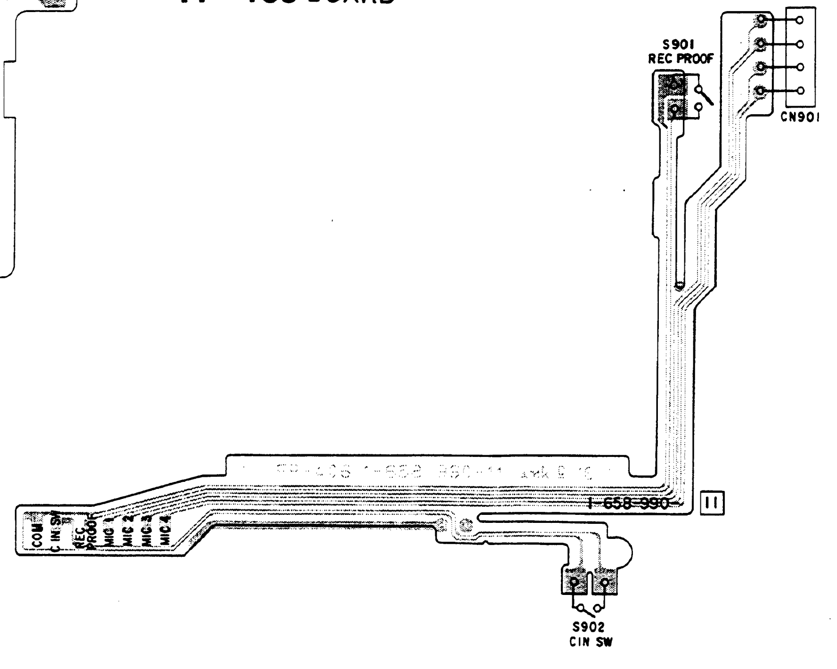
MD-63 BOARD


Q102
JR103
IC102
Q101
JR101
JR105
JR102
IC105
R108
IC101
F103
IC103
R101
C102
R102
RV101
S101
C OUT SW
COM
C IN SW
REC PROOF
MIC 1
MIC 2
MIC 3
MIC 4
09
1-658-991-

MD-64 BOARD

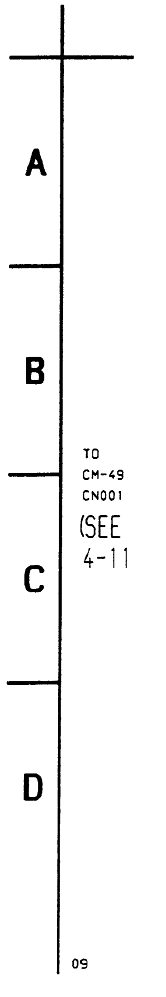

CC DOWN SW
S002
JR002
Q001
IC003
R008
IC006
R005
R004
RV001
IC004
IC005
R007
RV002
C002
1-658-992-

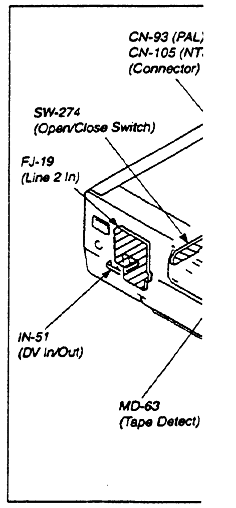
FP-406 BOARD


S901
REC PROOF
CN901
COM
C IN SW
REC PROOF
MIC 1
MIC 2
MIC 3
MIC 4
1-658-990-
S902
CIN SW

MD-63, MD

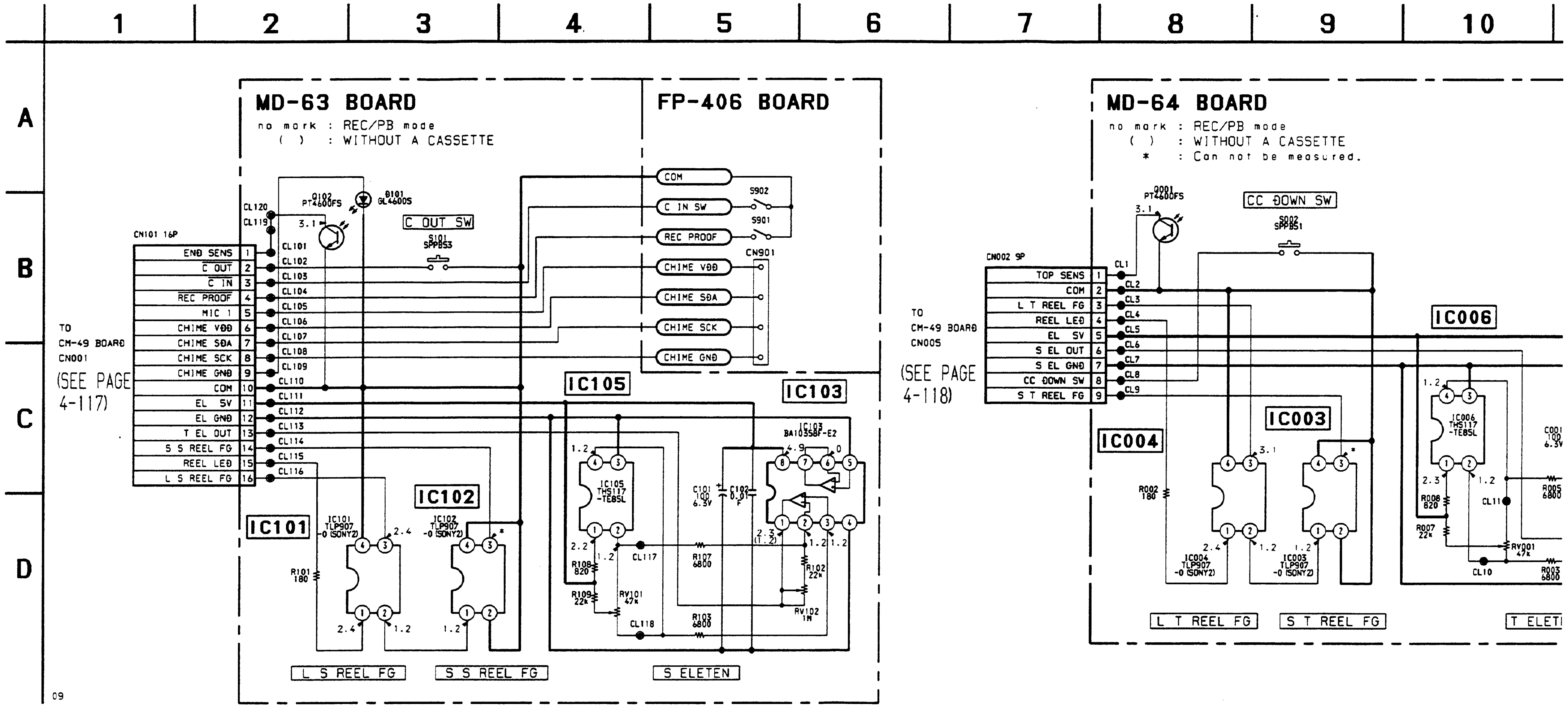
– Ref No. MD-


A
B
C
D
TO
CM-49
CN001
(SEE
4-11
09

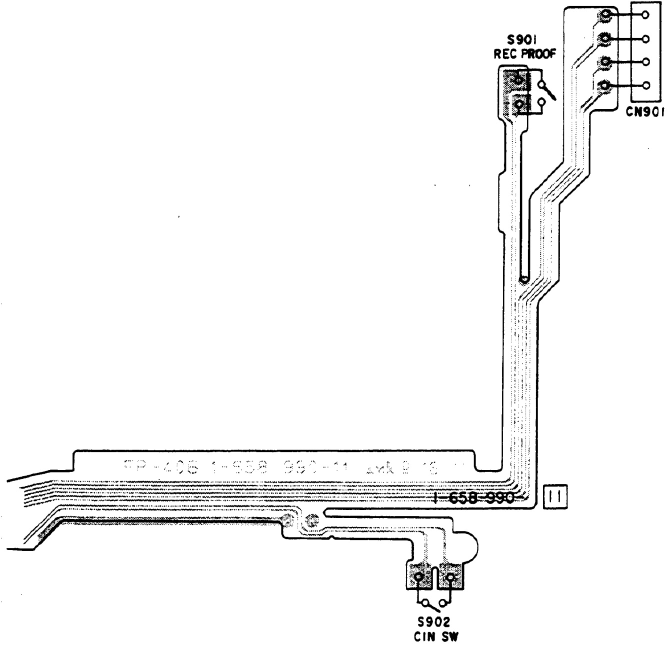

CN-93 (PAL)
CN-105 (NT
(Connector)
SW-274
(Open/Close Switch)
FJ-19
(Line 2 In)
IN-51
(DV in/Out)
MD-63
(Tape Detect)

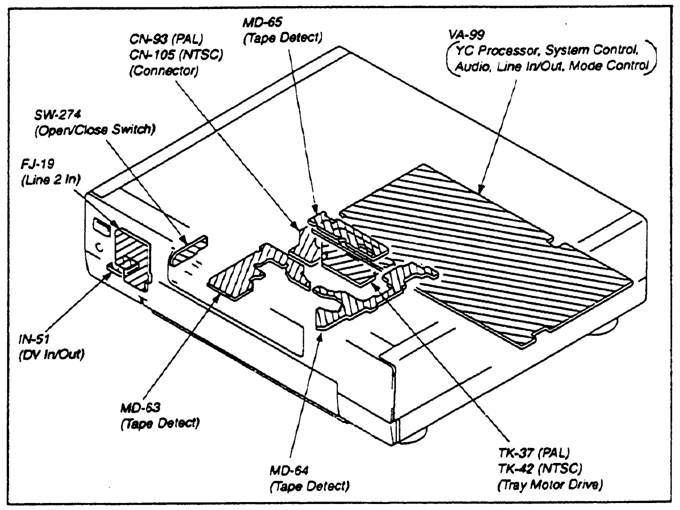
MD-63, MD-64, MD-65 (TAPE DETECT), FP-406 (TAPE SENSOR) SCHEMATIC DIAGRAMS

– Ref No. MD-63, MD-64, MD-65, FP-406 BOARDS: 7,000 series –

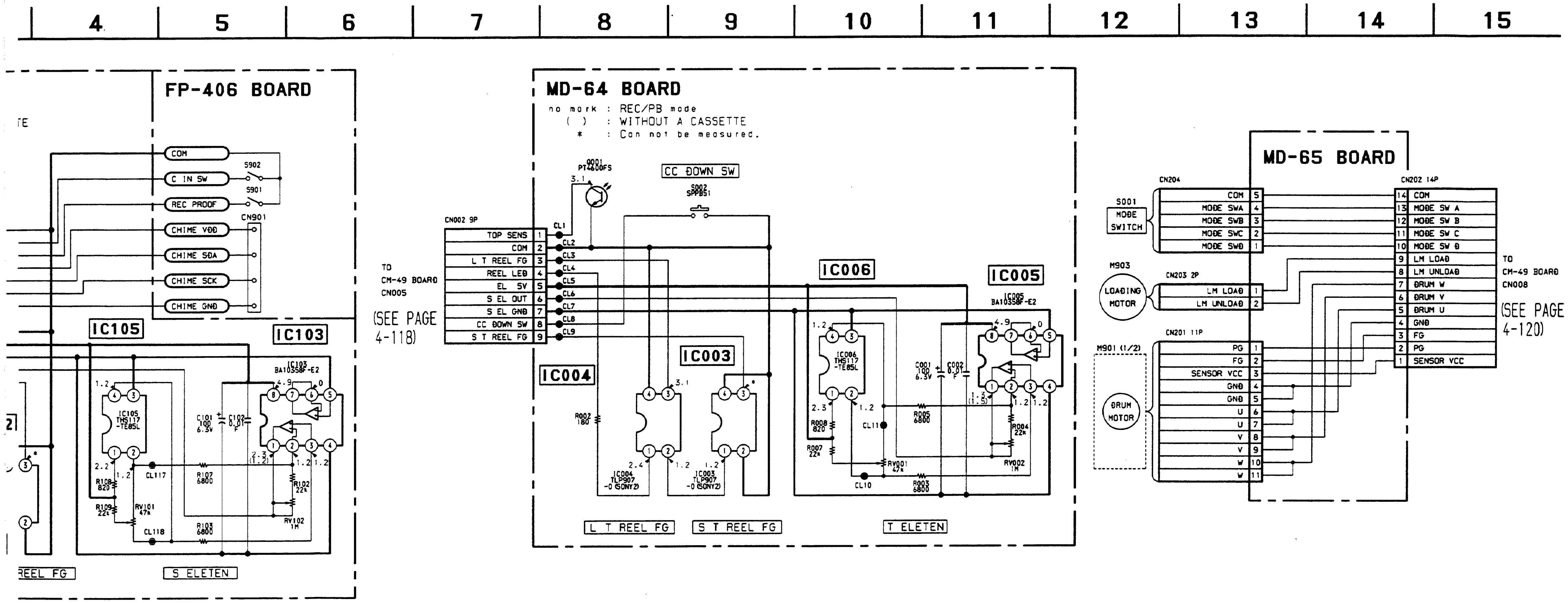

1
2
3
4
5
6
7
8
9
10
A
B
C
D
MD-63 BOARD
no mark : REC/PB mode
( ) : WITHOUT A CASSETTE
FP-406 BOARD
MD-64 BOARD
no mark : REC/PB mode
( ) : WITHOUT A CASSETTE
* : Can not be measured.
TO CM-49 BOARD CN001 (SEE PAGE 4-117)
TO CM-49 BOARD CN005 (SEE PAGE 4-118)
CN101 16P
END SENS
C OUT
C IN
REC PROOF
MIC 1
CHIME VDD
CHIME SDA
CHIME SCK
CHIME GND
COM
EL 5V
EL GND
T EL OUT
S S REEL FG
REEL LED
L S REEL FG
Q102 PT4600FS
D101 GL4600S
C OUT SW
S101 SPPB53
COM
C IN SW
REC PROOF
CHIME VDD
CHIME SDA
CHIME SCK
CHIME GND
S902
S901
CN901
IC101
IC102
IC105
IC103
IC101 TLP907 -0 (SONY2)
IC102 TLP907 -0 (SONY2)
IC105 TH5117 -TE85L
IC103 BA10358F-E2
L S REEL FG
S S REEL FG
S ELETEN
CN002 9P
TOP SENS
COM
L T REEL FG
REEL LED
EL 5V
S EL OUT
S EL GND
CC DOWN SW
S T REEL FG
Q001 PT4600FS
CC DOWN SW
S002 SPPB51
IC006
IC003
IC004
IC004 TLP907 -0 (SONY2)
IC003 TLP907 -0 (SONY2)
IC006 TH5117 -TE85L
L T REEL FG
S T REEL FG
T ELETI
09

FP-406 BOARD

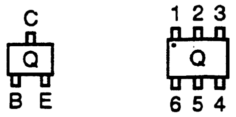

S901
REC PROOF
CN901
1-658-990-11
11
S902
CIN SW


CN-93 (PAL)
CN-105 (NTSC)
(Connector)
MD-65
(Tape Detect)
VA-99
(YC Processor, System Control, Audio, Line In/Out, Mode Control)
SW-274
(Open/Close Switch)
FJ-19
(Line 2 In)
IN-51
(DV In/Out)
MD-63
(Tape Detect)
MD-64
(Tape Detect)
TK-37 (PAL)
TK-42 (NTSC)
(Tray Motor Drive)

E SENSOR) SCHEMATIC DIAGRAMS


4
5
6
7
8
9
10
11
12
13
14
15
FP-406 BOARD
COM
C IN SW
REC PROOF
CHIME VDD
CHIME SDA
CHIME SCK
CHIME GND
S902
S901
CN901
IC105
IC103
IC105 THS117 -TE85L
IC103 BA10358F-E2
C101 100 6.3V
C102 0.01 F
R108 820
R109 22k
RV101 47k
R107 6800
R103 6800
R102 22k
RV102 1M
CL117
CL118
REEL FG
S ELETEN
MD-64 BOARD
no mark : REC/PB mode
( ) : WITHOUT A CASSETTE
* : Can not be measured.
Q001 PT4800FS
CC DOWN SW
S002 SPPB51
CN002 9P
TOP SENS
COM
L T REEL FG
REEL LED
EL 5V
S EL OUT
S EL GND
CC DOWN SW
S T REEL FG
CL1
CL2
CL3
CL4
CL5
CL6
CL7
CL8
CL9
TO CM-49 BOARD CN005
(SEE PAGE 4-118)
IC004
IC003
IC006
IC005
IC004 TLP907 -0 (SONY2)
IC003 TLP907 -0 (SONY2)
IC006 THS117 -TE85L
IC005 BA10358F-E2
R002 180
C001 100 6.3V
C002 0.01 F
R008 820
R007 22k
R005 6800
R003 6800
R004 22k
RV001 47k
RV002 1M
CL10
CL11
L T REEL FG
S T REEL FG
T ELETEN
MD-65 BOARD
CN204
S001 MODE SWITCH
COM
MODE SWA
MODE SWB
MODE SWC
MODE SWD
M903
LOADING MOTOR
CN203 2P
LM LOAD
LM UNLOAD
M901 (1/2)
DRUM MOTOR
CN201 11P
PG
FG
SENSOR VCC
GND
U
V
W
CN202 14P
COM
MODE SW A
MODE SW B
MODE SW C
MODE SW D
LM LOAD
LM UNLOAD
DRUM W
DRUM V
DRUM U
GND
FG
PG
SENSOR VCC
TO CM-49 BOARD CN008
(SEE PAGE 4-120)

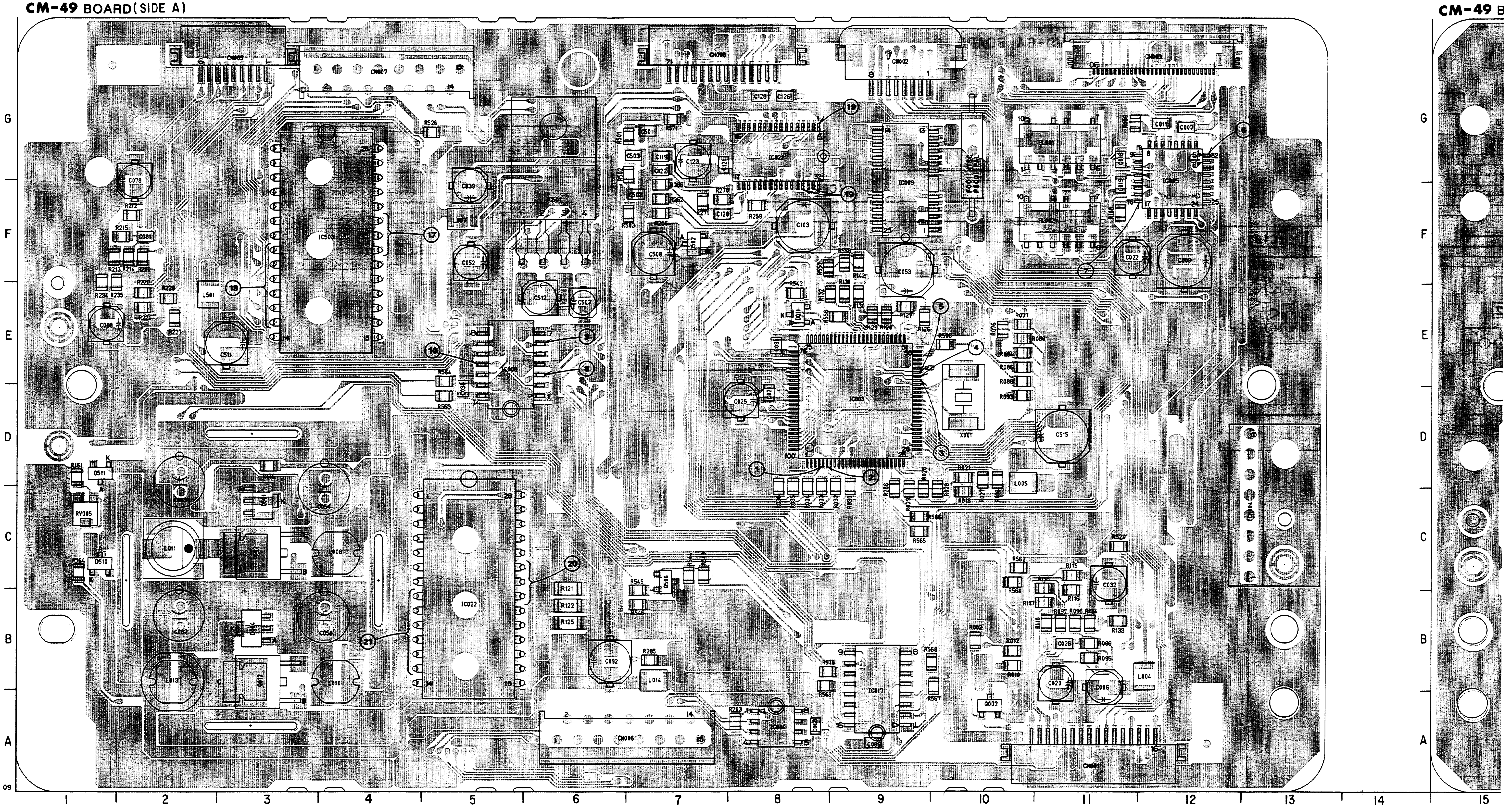
- **For Printed Wiring Boards.**
- Chip transistor


C
Q
B E
1 2 3
Q
6 5 4

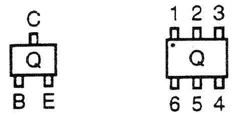
CM-49 (SERVO, SYSTEM CONTROL) PRINTED WIRING BOARD

– Ref No. CM-49 BOARD: 6,000 series –

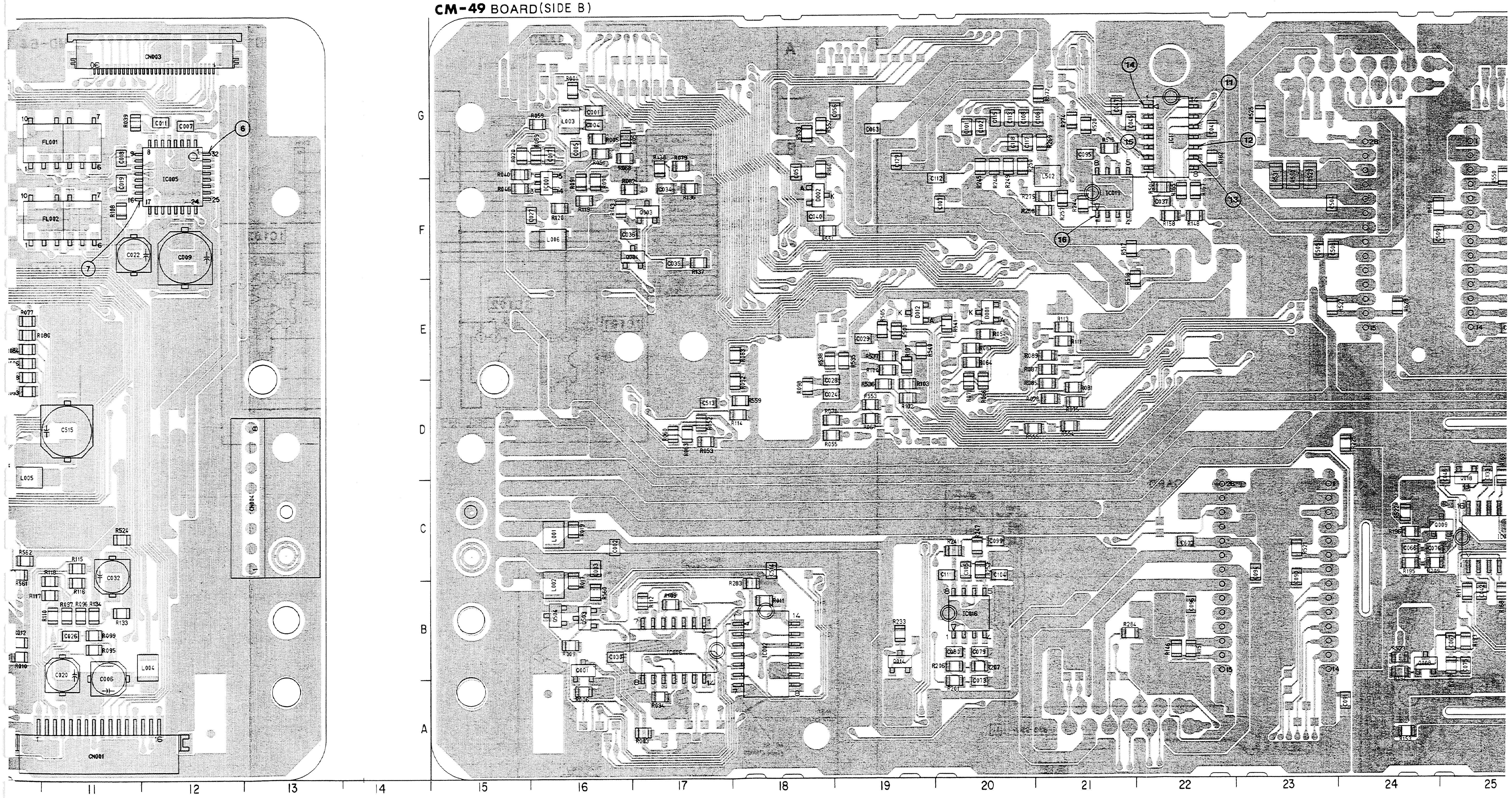
There are few cases that the part isn't mounted in this model is printed on this diagram.

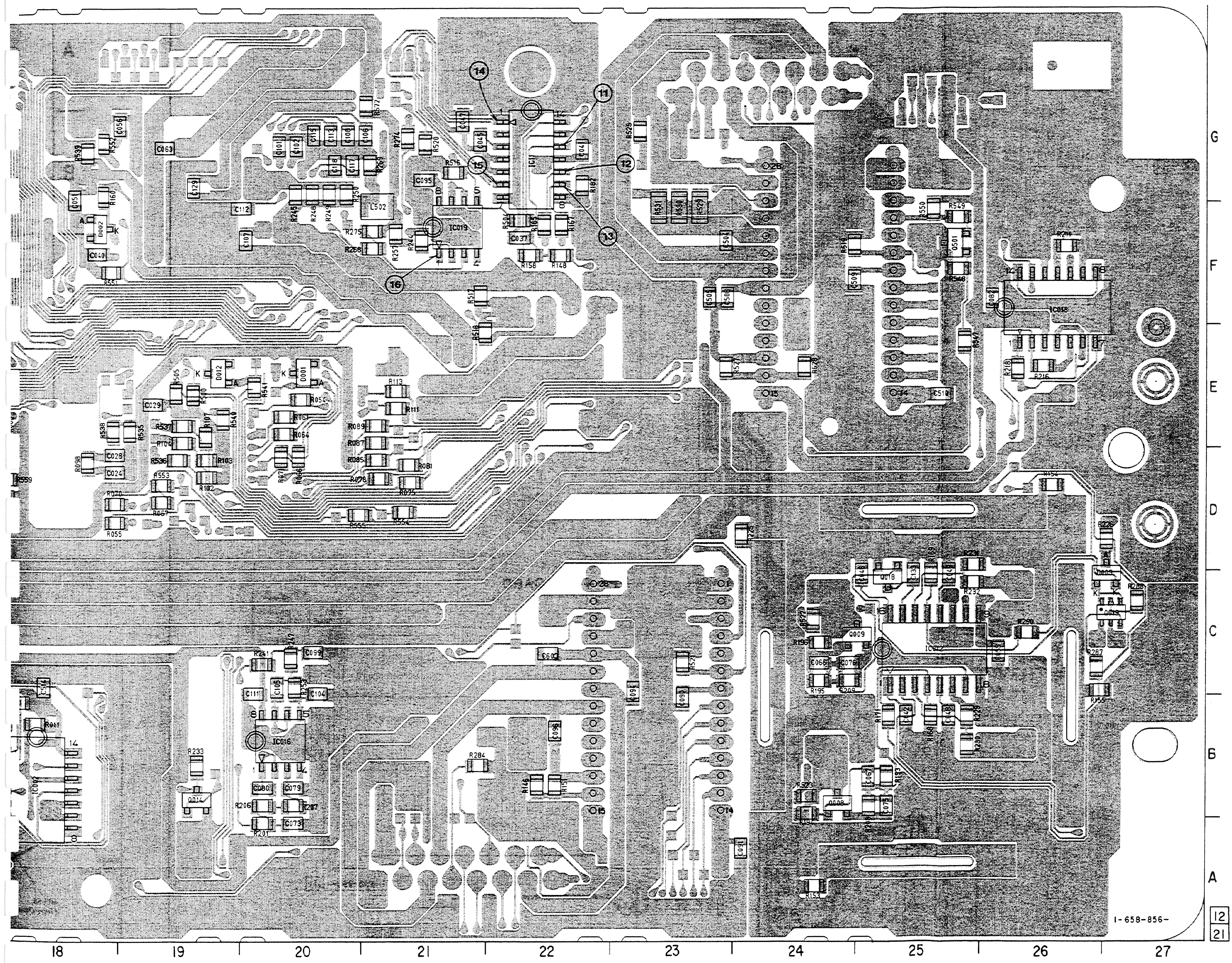

CM-49 BOARD(SIDE A)
CM-49 B
G
F
E
D
C
B
A
09
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
CN005
CN007
CN008
CN002
CN003
CN006
CN001
IC503
IC501
IC008
IC022
IC121
IC009
IC005
IC003
IC017
IC006
FL001
FL002
X001
C078
C081
C088
C516
C052
C039
C512
C502
C501
C503
C508
C123
C119
C122
C126
C128
C103
C053
C022
C009
C025
C515
C003
C086
C004
C082
C056
C092
C032
C026
C020
C006
C007
C011
L501
L007
L011
L008
L013
L010
L014
L005
L004
D511
D510
RV005
R212
R215
R213
R214
R221
R220
R234
R235
R222
R227
R526
R554
R563
R545
R285
R121
R122
R125
R203
R576
R563
R568
R567
R566
R565
R542
R506
R562
R561
R115
R116
R117
R118
R097
R096
R104
R133
R099
R095
R072
R082
R010
R076
R077
R080
R086
R088
R093
R021
R048
R020
R029
R286
Q002
①
②
③
④
⑤
⑦
⑧
⑨
⑩
⑰
⑱
⑲
⑳
㉑
100
1
2
14
15
28

- **For Printed Wiring Boards.**
- Chip transistor


C
Q
B E
1 2 3
Q
6 5 4

CM-49 BOARD(SIDE B)

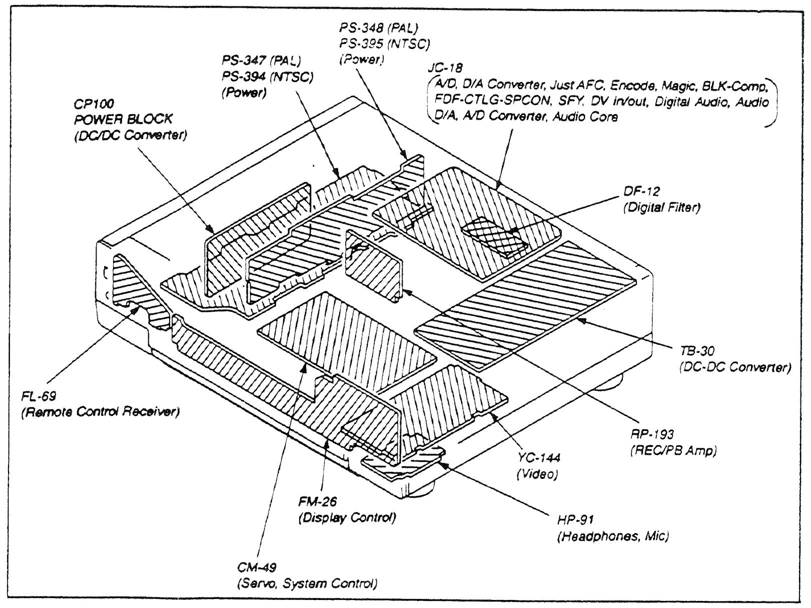

CN003
FL001
FL002
IC005
C009
C022
C515
L005
CN004
CN001
IC001
IC019
IC016
IC002
IC006
L502
Q009
Q018
G
F
E
D
C
B
A
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25


A
G
F
E
D
C
B
A
18
19
20
21
22
23
24
25
26
27
⑪
⑫
⑬
⑭
⑮
⑯
IC019
IC016
IC018
1-658-856-

12 NTSC Mode
21 PAL Mode

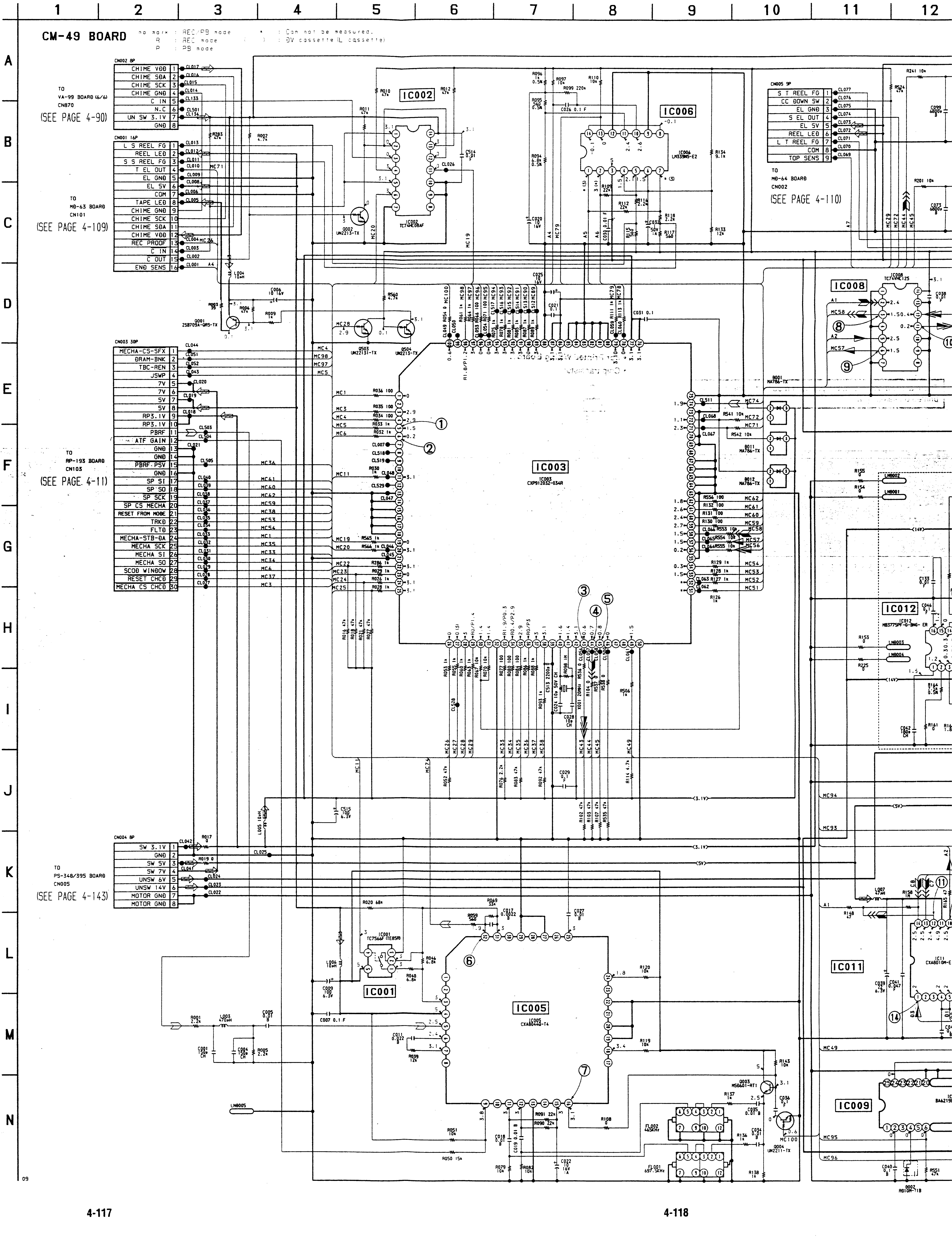
CM-49 BOARD

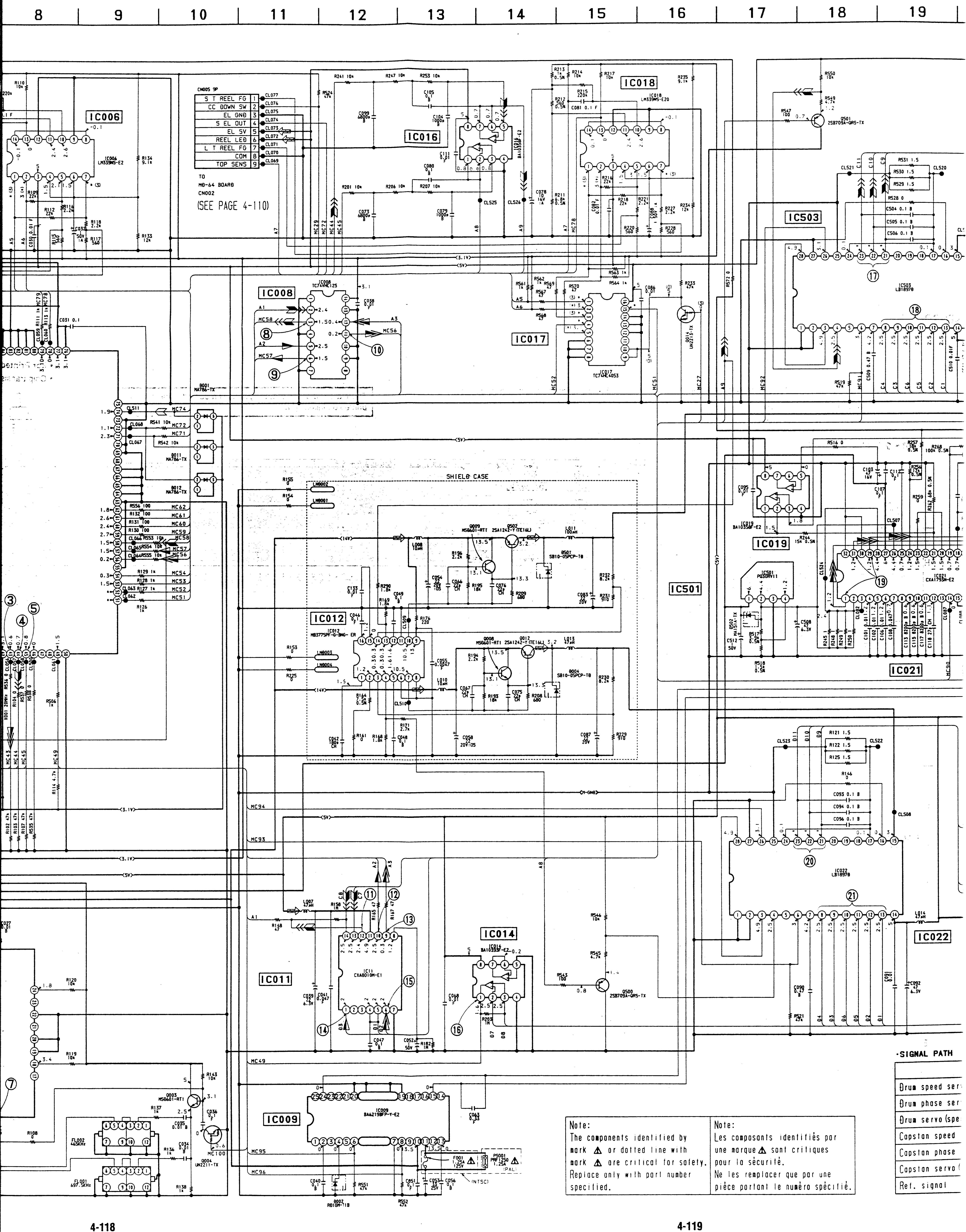
CN001	A-11
CN002	G-9
CN003	G-12
CN004	C-13
CN005	G-3
CN006	A-6
CN007	G-4
CN008	G-8
D001	E-20
D002	F-18
D004	B-3
D011	E-8
D012	E-19
D501	C-3
D502	F-7
IC001	F-16
IC002	B-18
IC003	D-9
IC005	G-12
IC006	B-17
IC008	E-5
IC009	F-9
IC011	G-22
IC012	C-25
IC014	A-8
IC016	B-20
IC017	B-9
IC018	F-26
IC019	F-21
IC021	G-8
IC022	B-5
IC501	F-6
IC503	F-4
Q001	B-16
Q002	A-10
Q003	F-17
Q004	F-17
Q008	B-24
Q009	C-25
Q012	B-3
Q014	B-19
Q500	C-7
Q501	F-25
Q502	C-3
Q503	B-16
Q504	B-16


PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

CM-49 (SERVO, SYSTEM CONTROL) SCHEMATIC DIAGRAM

– Ref No. CM-49 BOARD: 6,000 series –

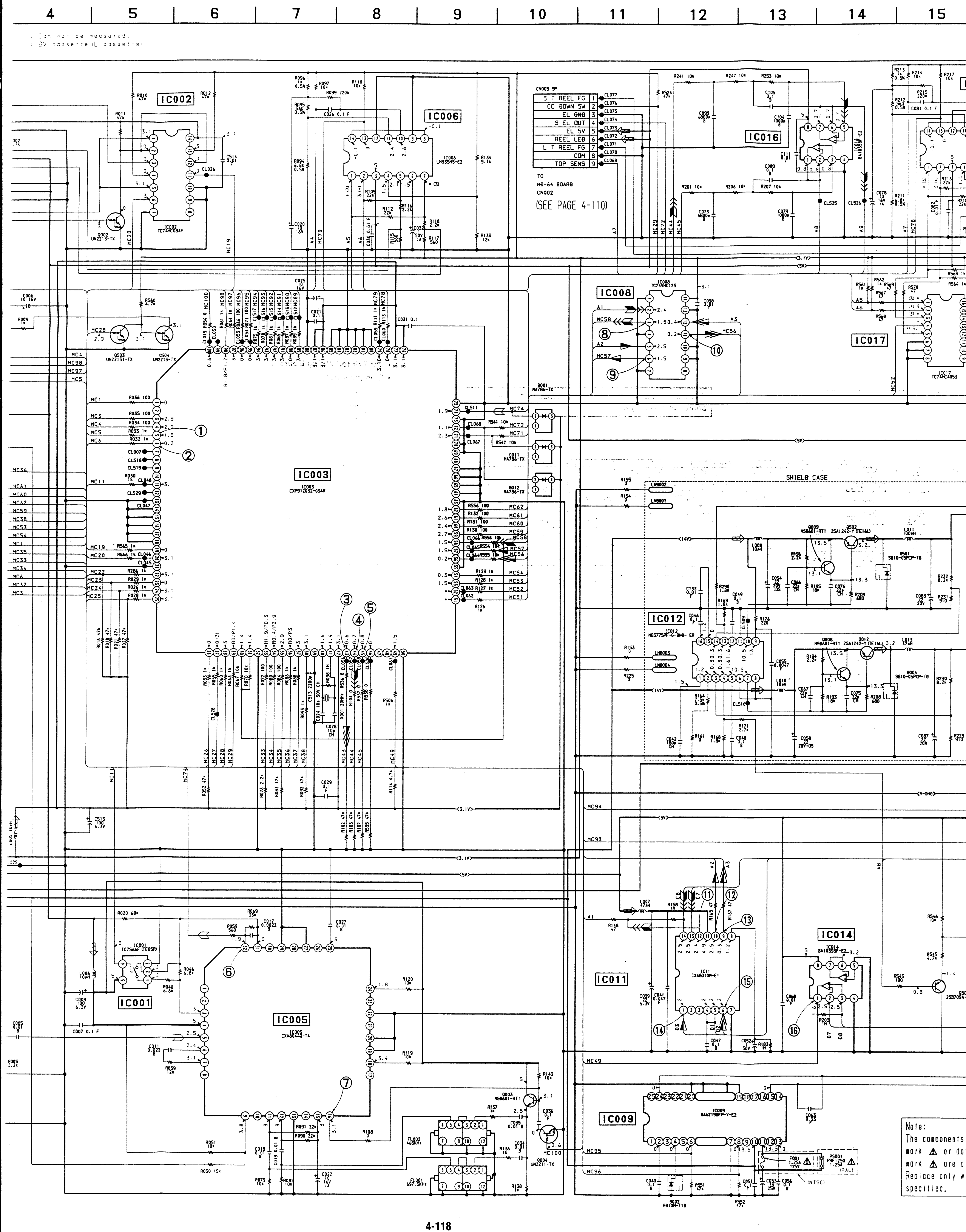

CM-49 BOARD
no mark : REC/PB mode
R : REC mode
P : PB mode
* : Can not be measured.
( ) : DV cassette (L cassette)
CN002 8P
CHIME VDD
CHIME SDA
CHIME SCK
CHIME GND
C IN
N.C
UN SW 3.1V
GND
TO VA-99 BOARD (6/6) CN870
(SEE PAGE 4-90)
CN001 16P
L S REEL FG
REEL LED
S S REEL FG
T EL OUT
EL GND
EL 5V
COM
TAPE LED
CHIME GND
CHIME SCK
CHIME SDA
CHIME VDD
REC PROOF
C IN
C OUT
END SENS
TO MD-63 BOARD CN101
(SEE PAGE 4-109)
CN003 30P
MECHA-CS-SFX
DRAM-BNK
TBC-REN
JSWP
7V
7V
5V
5V
RP3.1V
RP3.1V
PBRF
ATF GAIN
GND
GND
PBRF.PSV
GND
SP SI
SP SO
SP SCK
SP CS MECHA
RESET FROM MODE
TRKD
FLTD
MECHA-STB-DA
MECHA SCK
MECHA SI
MECHA SO
SCDD WINDOW
RESET CHCD
MECHA CS CHCD
TO RP-193 BOARD CN103
(SEE PAGE 4-11)
CN004 8P
SW 3.1V
GND
SW 5V
SW 7V
UNSW 6V
UNSW 14V
MOTOR GND
MOTOR GND
TO PS-348/395 BOARD CN005
(SEE PAGE 4-143)
CN005 9P
S T REEL FG
CC DOWN SW
EL GND
S EL OUT
EL 5V
REEL LED
L T REEL FG
COM
TOP SENS
TO MD-64 BOARD CN002
(SEE PAGE 4-110)
IC002
IC002 TC74HC08AF
IC006
IC006 LM339MS-E2
IC003
IC003 CXP912052-034R
IC008
IC008 TC74VHC125
IC012
IC012 MB3775PF-G-BND-ER
IC001
IC001 TC7S66F (TE85R)
IC005
IC005 CXA8044Q-T4
IC011
IC011 CXA8010M-E
IC009
Q001 2SB709A-QRS-TX
Q002 UN2213-TX
Q503 UN2213-TX
Q504 UN2213-TX
Q003 MSD601-RT1
Q004 UN2211-TX
D001 MA786-TX
D011 MA786-TX
D012 MA786-TX
FL001 697.5kHz
FL002 465kHz
LN8005
(3.1V)
(5V)
(14V)
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑭
1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
K
L
M
N


8
9
10
11
12
13
14
15
16
17
18
19
IC006
LM339NS-E2
CN005 9P
S T REEL FG
CC DOWN SW
EL GND
S EL OUT
EL 5V
REEL LED
L T REEL FG
COM
TOP SENS
TO
MD-64 BOARD
CN002
(SEE PAGE 4-110)
IC016
BA10358F-E2
IC018
LM339NS-E20
Q501
2SB709A-QRS-TX
IC503
LB1897B
IC008
TC74VHC125
IC017
TC74HC4053
Q014
UN2215-TX
D001
MA786-TX
D011
MA786-TX
D012
MA786-TX
SHIELD CASE
IC012
MB3775PF-G-BNG-ER
Q009
MSB601-RT1
Q502
2SA1242-Y(TE16L)
Q008
MSB601-RT1
Q012
2SA1242-Y(TE16L)
D501
SB10-05PCP-TB
D004
SB10-05PCP-TB
IC501
IC019
BA10358F-E2
IC501
PQ30RV11
D502
MA151A-TX
IC021
CXA1793N-E2
IC022
LB1897B
IC011
CXA8010M-E1
IC014
BA10358F-E2
Q500
2SB709A-QRS-TX
IC009
BA6219BFP-Y-E2
Q003
MSB601-RT1
Q004
UN2211-TX
FL002
465KHz
FL001
697.5KHz
F001
1.25A
125V
PS001
PRF1250
1.25A
(PAL)
(NTSC)
D002
RD10M-T1B
SHIELD CASE

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

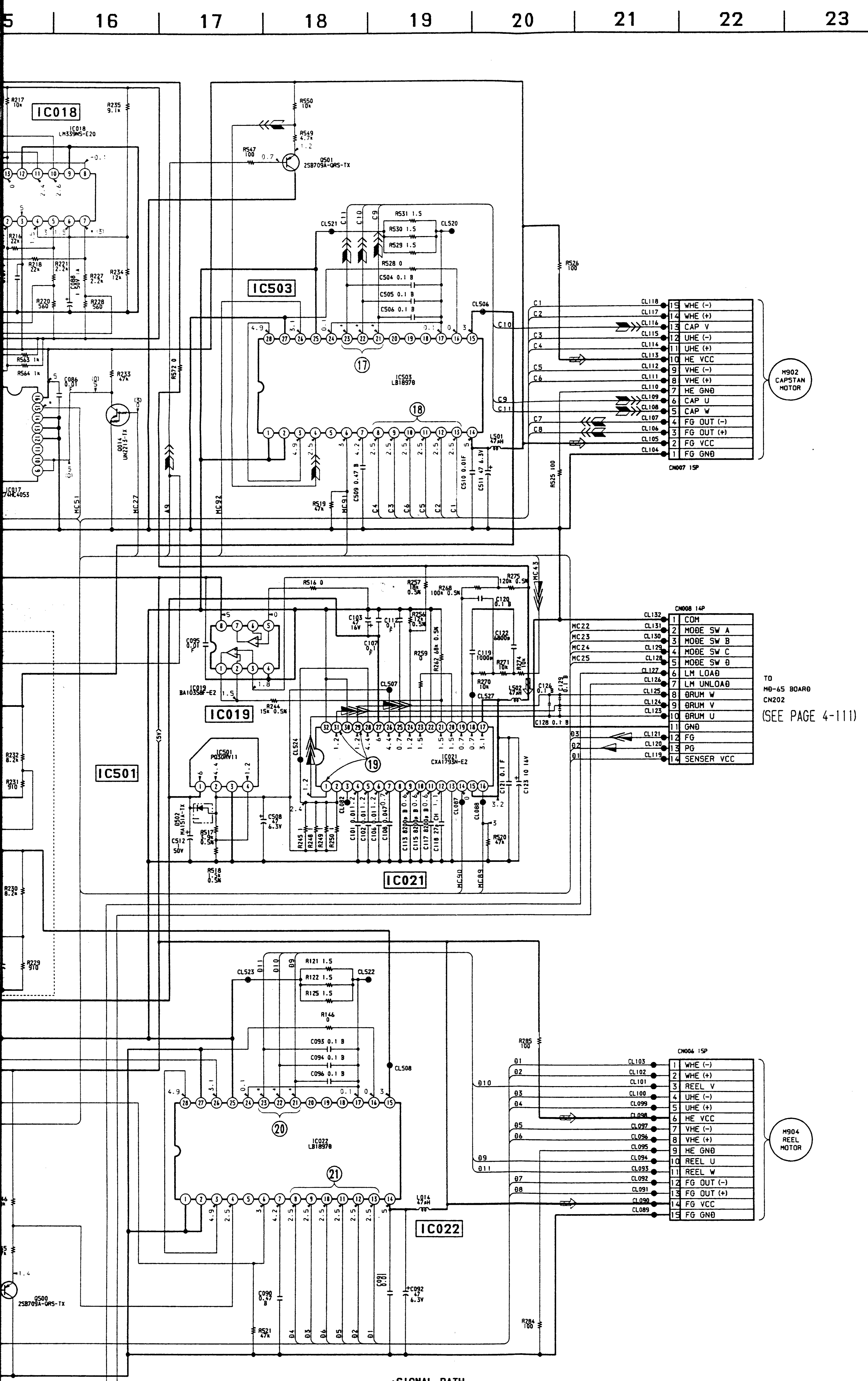
-SIGNAL PATH

Drum speed ser
Drum phase ser
Drum servo (spe
Capstan speed
Capstan phase
Capstan servo (
Ref. signal


4
5
6
7
8
9
10
11
12
13
14
15
IC002
TC74HC08AF
IC006
LM339NS-E2
IC016
BA10358F-E2
IC003
CXP912032-034R
IC008
TC74VHC125
IC017
TC74HC4053
IC012
MB3775PF-G-BND-ER
IC001
TC7S66F (TE85R)
IC005
CXA8044Q-T4
IC011
CXA8010M-E1
IC014
BA10358F-E2
IC009
BA6219BFP-Y-E2
CN005 9P
S T REEL FG
CC DOWN SW
EL GND
S EL OUT
EL 5V
REEL LED
L T REEL FG
COM
TOP SENS
TO
MD-64 BOARD
CN002
(SEE PAGE 4-110)
SHIELD CASE
FL002 465kHz
FL001 697.5kHz
PS001
(INTSC)
(PAL)
<3.1V>
<5V>
<14V>

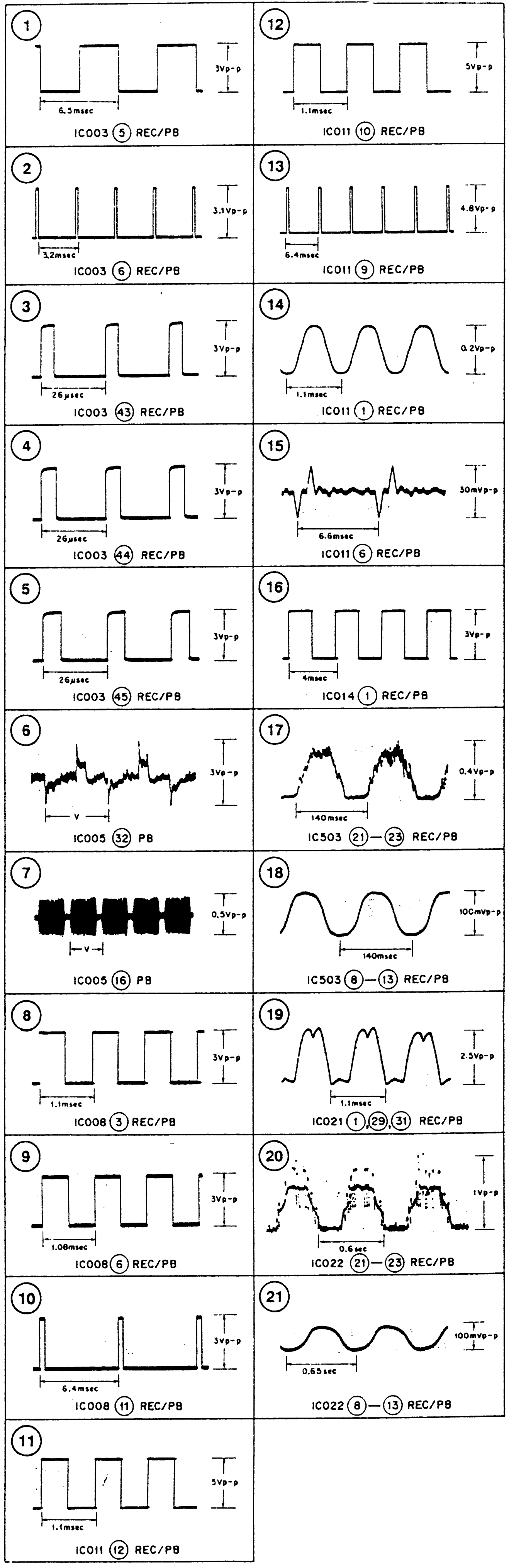
Can not be measured.
SV cassette (L cassette)

Note:
The components
mark ⚠ or do
mark ⚠ are c
Replace only w
specified.



5
16
17
18
19
20
21
22
23
IC018
LM339MS-E20
IC017
74HC4053
Q501
2SB709A-QRS-TX
IC503
LB1897B
⑰
⑱
IC501
PQ30RV11
IC019
BA10358F-E2
IC021
CXA1793N-E2
⑲
IC022
LB1897B
⑳
㉑
Q500
2SB709A-QRS-TX
Q502
MA152WA-TX
CN007 15P
15 WHE (-)
14 WHE (+)
13 CAP V
12 UHE (-)
11 UHE (+)
10 HE VCC
9 VHE (-)
8 VHE (+)
7 HE GND
6 CAP U
5 CAP W
4 FG OUT (-)
3 FG OUT (+)
2 FG VCC
1 FG GND
M902
CAPSTAN
MOTOR
CN008 14P
1 COM
2 MODE SW A
3 MODE SW B
4 MODE SW C
5 MODE SW D
6 LM LOAD
7 LM UNLOAD
8 DRUM W
9 DRUM V
10 DRUM U
11 GND
12 FG
13 PG
14 SENSER VCC
TO
MD-65 BOARD
CN202
(SEE PAGE 4-111)
CN006 15P
1 WHE (-)
2 WHE (+)
3 REEL V
4 UHE (-)
5 UHE (+)
6 HE VCC
7 VHE (-)
8 VHE (+)
9 HE GND
10 REEL U
11 REEL W
12 FG OUT (-)
13 FG OUT (+)
14 FG VCC
15 FG GND
M904
REEL
MOTOR

CM-49 BOARD



·SIGNAL PATH

	REC	REC/PB	PB
Drum speed servo		▶	
Drum phase servo		▶▶	
Drum servo (speed and phase)		▶▶▶	
Capstan speed servo			
Capstan phase servo			
Capstan servo (speed and phase)		▶››	
Ref. signal			▷

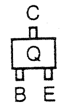
	Note:
ponents identified by ⚠ or dotted line with ⚠ are critical for safety. e only with part number ied.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

FL-69 (REMOTE CONTROL RECEIVER), FM-26 (DISPLAY CONTROL) PRINTED WIRING BOARDS

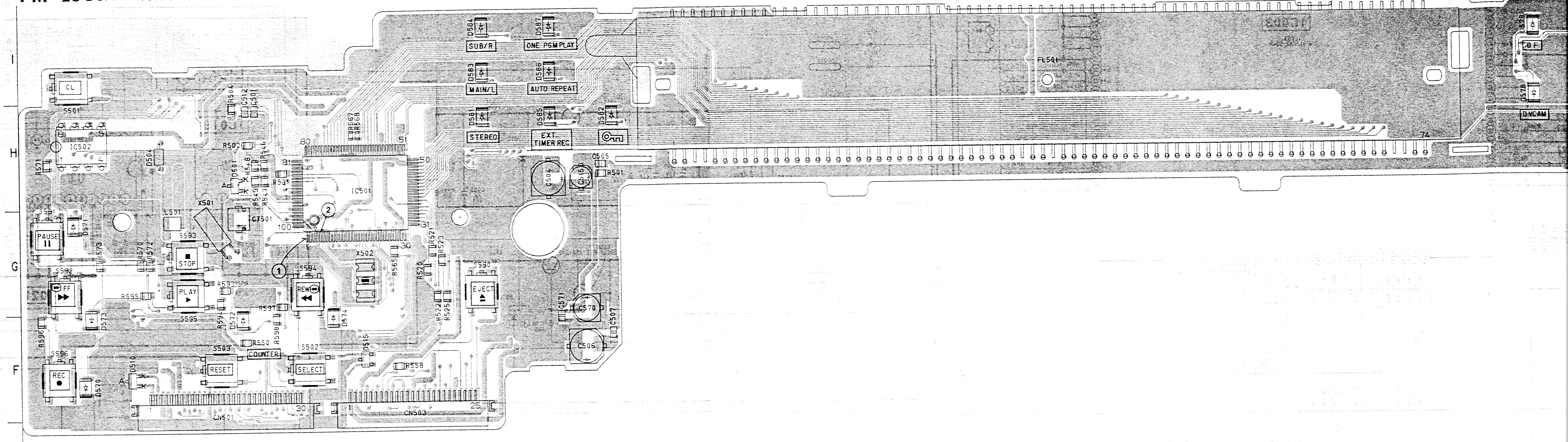
– Ref No. FL-69, FM-26 BOARDS: 8,000 series –

There are few cases that the part isn't mounted in this model is printed on this diagram.

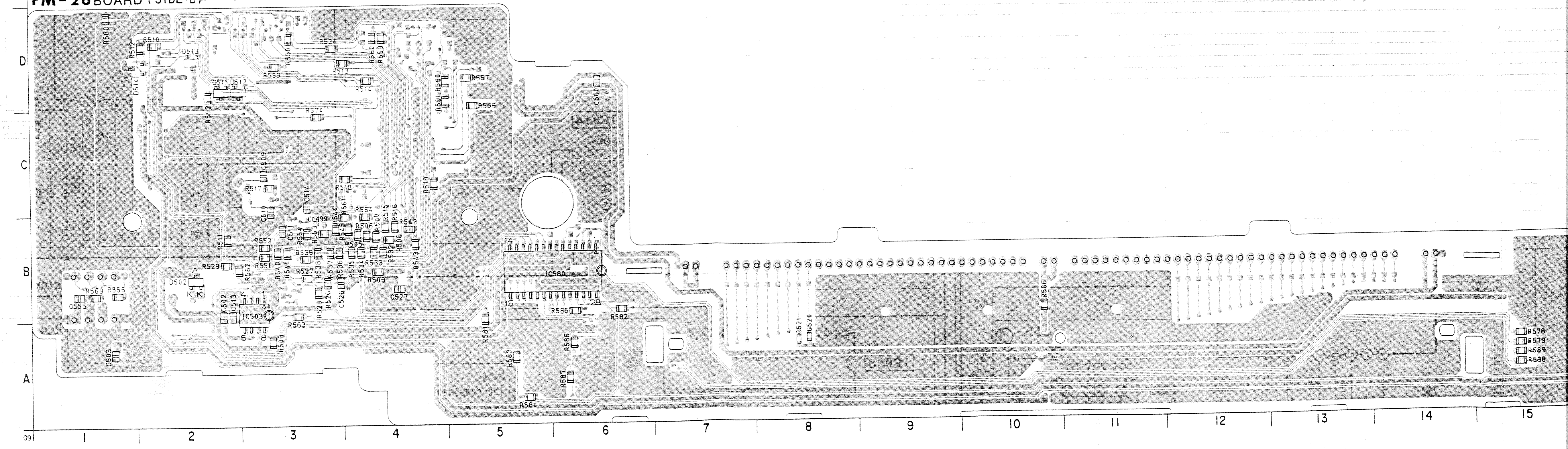
- **For Printed Wiring Boards.**
- Chip transistor



FM-26 BOARD (SIDE A)


I
H
G
F
E
SUB/R
ONE PGM PLAY
MAIN/L
AUTO REPEAT
STEREO
EXT. TIMER REC
D584
D587
D583
D586
D581
D585
D582
CL
S501
IC502
IC501
X501
X502
L501
FL501
PAUSE
STOP
PLAY
REW
FF
EJECT
REC
RESET
SELECT
COUNTER
S502
S503
S592
S593
S594
S595
S596
CN501
CN503
C505
C506
C507
C570
R501
R502
R558
R565
R595
R596
R597
C0F
DVCAM
80
51
100
30
25
74
1
2

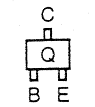
FM-26 BOARD (SIDE B)

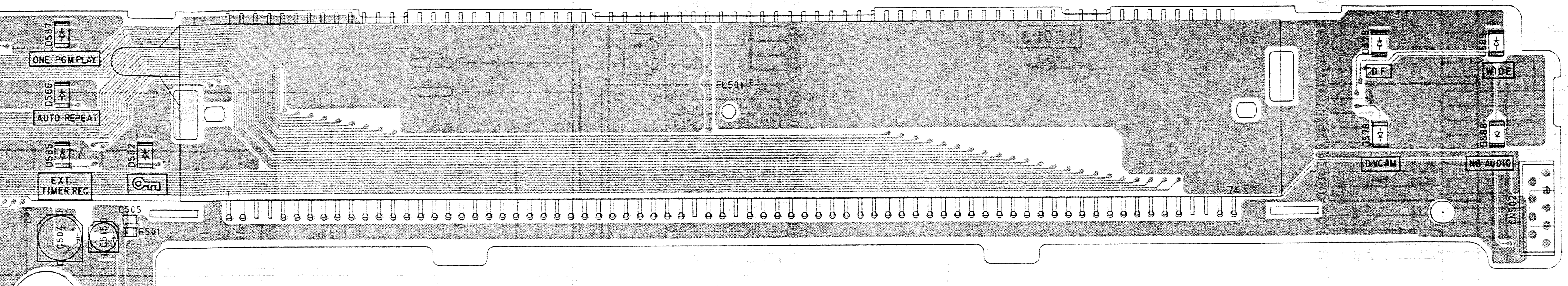

D
C
B
A
IC503
IC580
D502
D513
D514
R580
R510
R512
R524
R557
R555
R599
R517
R518
R519
R529
R551
R552
R563
R566
R581
R582
R583
R584
R586
R587
R595
C503
C555
C527
C560
R578
R579
R589
R588
14
15
28
1
09
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

RINTED WIRING BOARDS

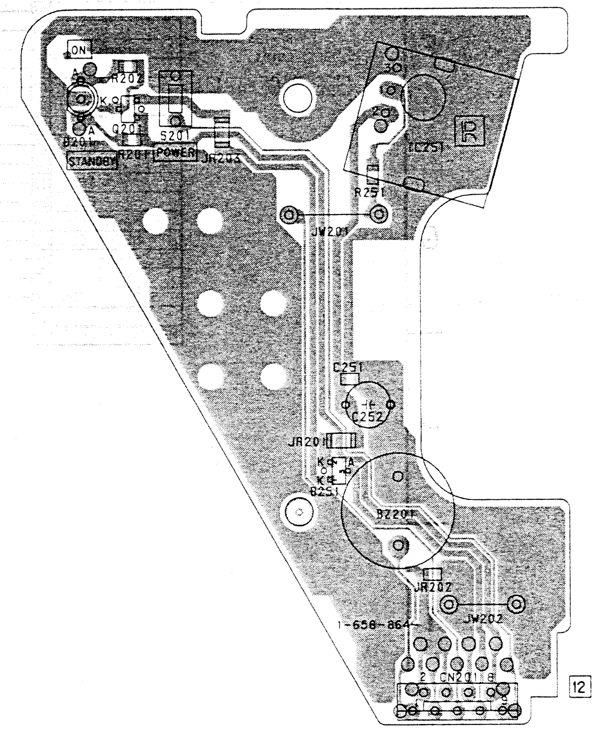
There are few cases that the part isn't mounted in this model is printed on this diagram.

- **For Printed Wiring Boards.**
- Chip transistor



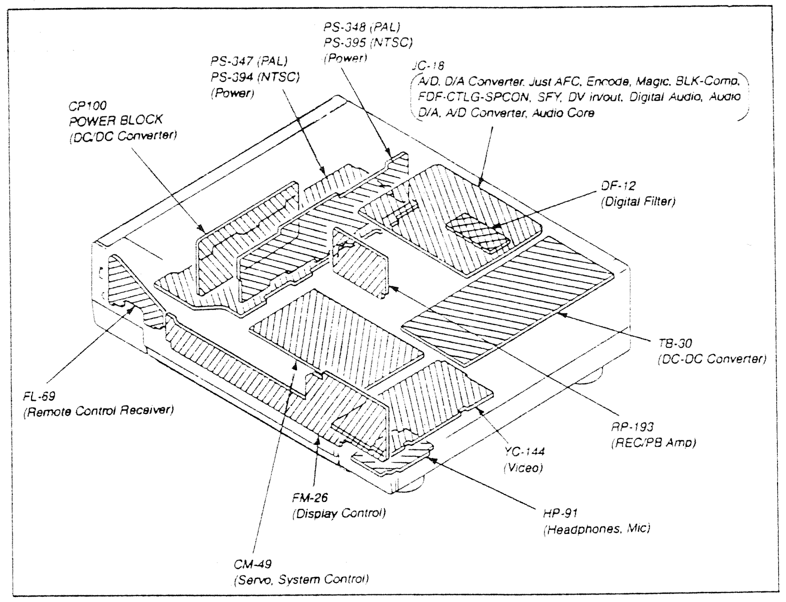

D587
ONE PGM PLAY
D586
AUTO REPEAT
D585
D582
EXT. TIMER REC
C505
R501
FL501
D579
D.F
WIDE
D578
D589
DVCAM
NO AUDIO
CN502
74

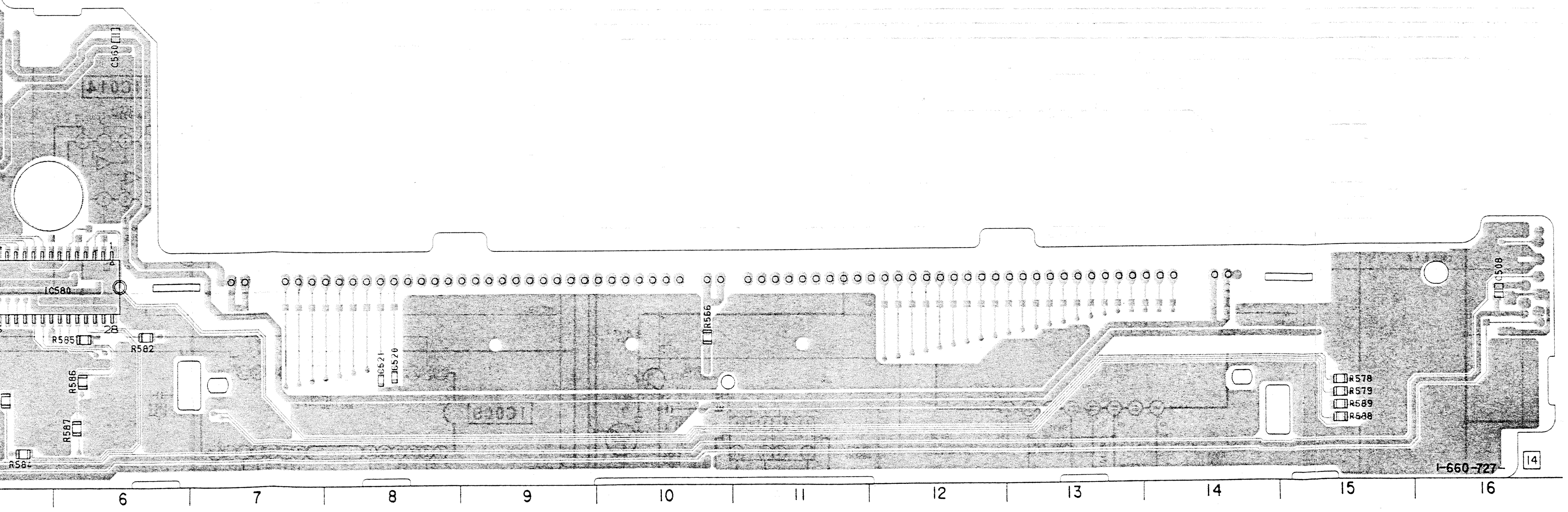
FL-69 BOARD


ON
STANDBY
POWER
S201
JR203
IC251
R251
JW201
C251
C252
JR201
D251
S220
JR202
JW202
1-658-864-
CN201
12

FM-26 BOARD

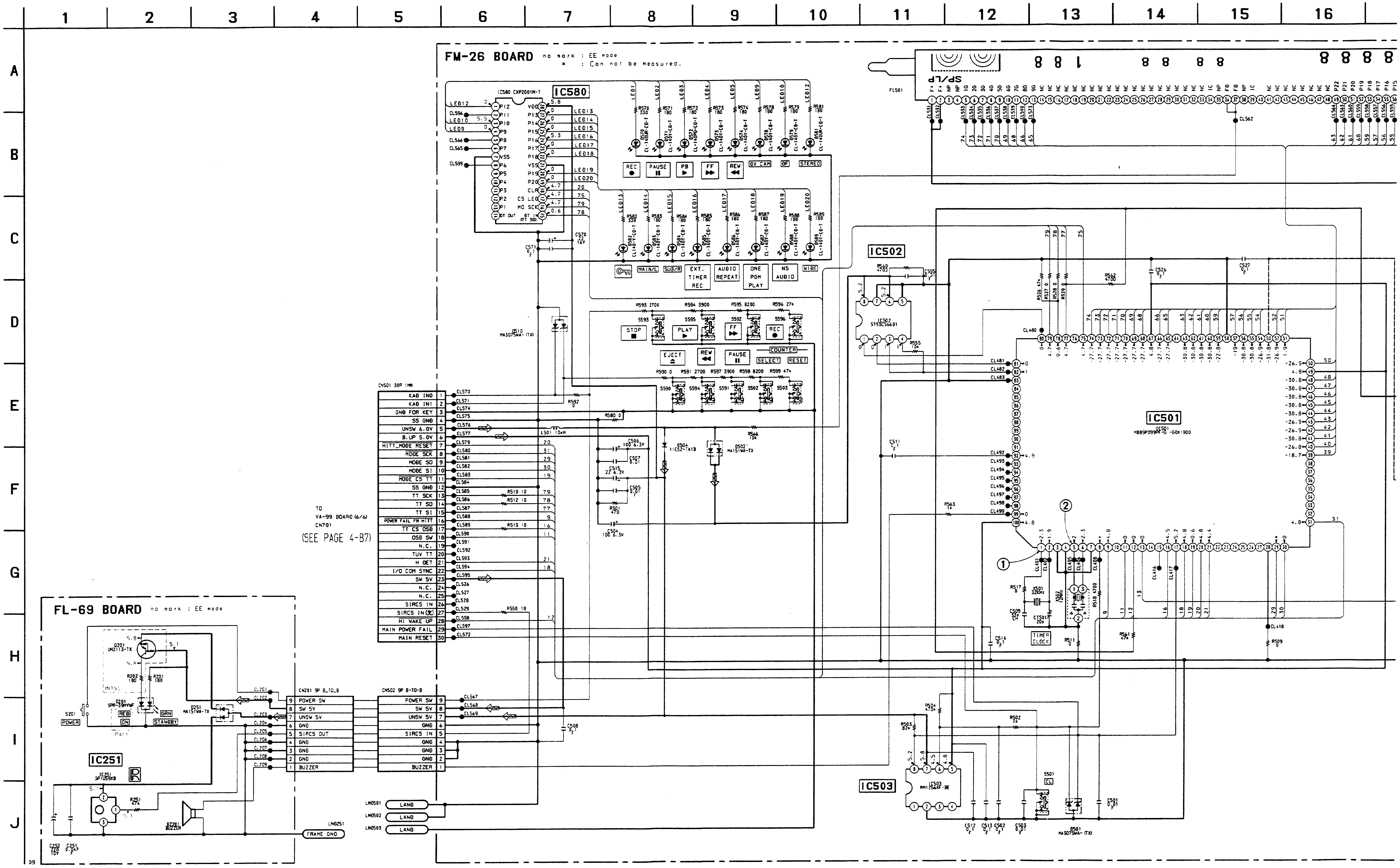
CN501	F-2
CN502	H-16
CN503	F-4
D501	H-3
D502	B-2
D504	H-2
D510	F-2
D570	F-1
D571	G-1
D572	F-3
D573	F-1
D574	F-3
D578	H-15
D579	I-15
D581	H-5
D582	H-6
D583	I-5
D584	I-5
D585	H-6
D586	I-6
D587	I-6
D588	H-16
D589	I-16
IC501	H-4
IC502	H-1
IC503	B-3
IC580	B-5


PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
(A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core)
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

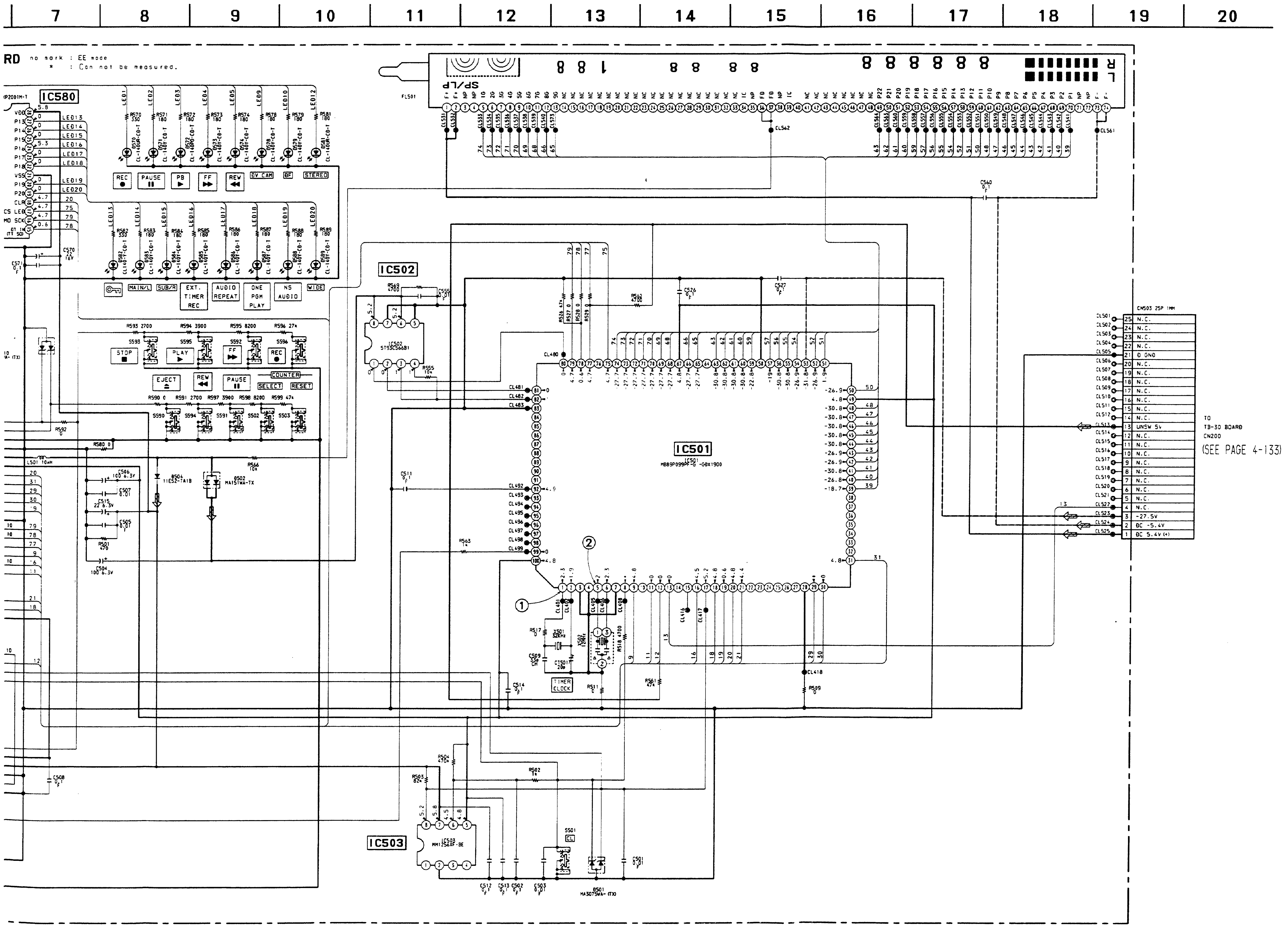

C550
IC580
R585
2B
R582
R586
R587
R584
R566
R578
R579
R589
R588
D588
1-660-727-
14
6
7
8
9
10
11
12
13
14
15
16

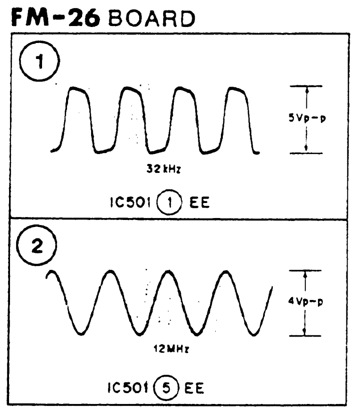
FL-69 (REMOTE CONTROL RECEIVER), FM-26 (DISPLAY CONTROL) SCHEMATIC DIAGRAMS

– Ref No. FL-69, FM-26 BOARDS: 8,000 series –



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
FM-26 BOARD
no mark : EE mode
* : Can not be measured.
IC580
IC502
IC501
IC503
FL501
SP/LP
REC
PAUSE
PB
FF
REW
8V CAM
OF
STEREO
MAIN/L
SUB/R
EXT. TIMER REC
AUDIO REPEAT
ONE PGM PLAY
NS AUDIO
WIDE
STOP
PLAY
EJECT
COUNTER
SELECT
RESET
TIMER CLOCK
CN501 30P 1MM
KAD IN0
KAD IN1
GND FOR KEY
SS GND
UNSW 6.0V
B.UP 5.0V
MITT_MODE RESET
MODE SCK
MODE SO
MODE SI
MODE CS TT
SS GND
TT SCK
TT SO
TT SI
POWER FAIL FM MITT
TT CS OSD
OSD SW
N.C.
TUV TT
H DET
I/O COM SYNC
SW 5V
N.C.
N.C.
SIRCS IN
SIRCS IN
HI WAKE UP
MAIN POWER FAIL
MAIN RESET
TO VA-99 BOARD (6/6) CN701
(SEE PAGE 4-87)
FL-69 BOARD
no mark : EE mode
IC251
CN201 9P B_TO_B
CN502 9P B-TO-B
POWER SW
SW 5V
UNSW 5V
GND
SIRCS OUT
SIRCS IN
BUZZER
POWER
RED
GRN
ON
STANDBY
BZ201 BUZZER
LAND
FRAME GND
①
②


7
8
9
10
11
12
13
14
15
16
17
18
19
20
RD no mark : EE mode
* : Can not be measured.
IC580
IC502
IC501
MB89P099PF-G -G0X1900
IC503
FL501
SP/LP
REC
PAUSE
PB
FF
REW
DV CAM
BF
STEREO
MAIN/L
SUB/R
EXT. TIMER REC
AUDIO REPEAT
ONE PGM PLAY
NS AUDIO
WIDE
STOP
PLAY
EJECT
SELECT
RESET
COUNTER
TIMER CLOCK
CN503 25P 1MM
UNSW 5V
D GND
-27.5V
DC -5.4V
DC 5.4V
TO TB-30 BOARD CN200
(SEE PAGE 4-133)



REMOTE CONTROL RECEIVER, DISPLAY CONTROL

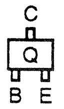
FL-69 FM-26

TB-30 (DC-DC CONVERTER) PRINTED WIRING BOARD

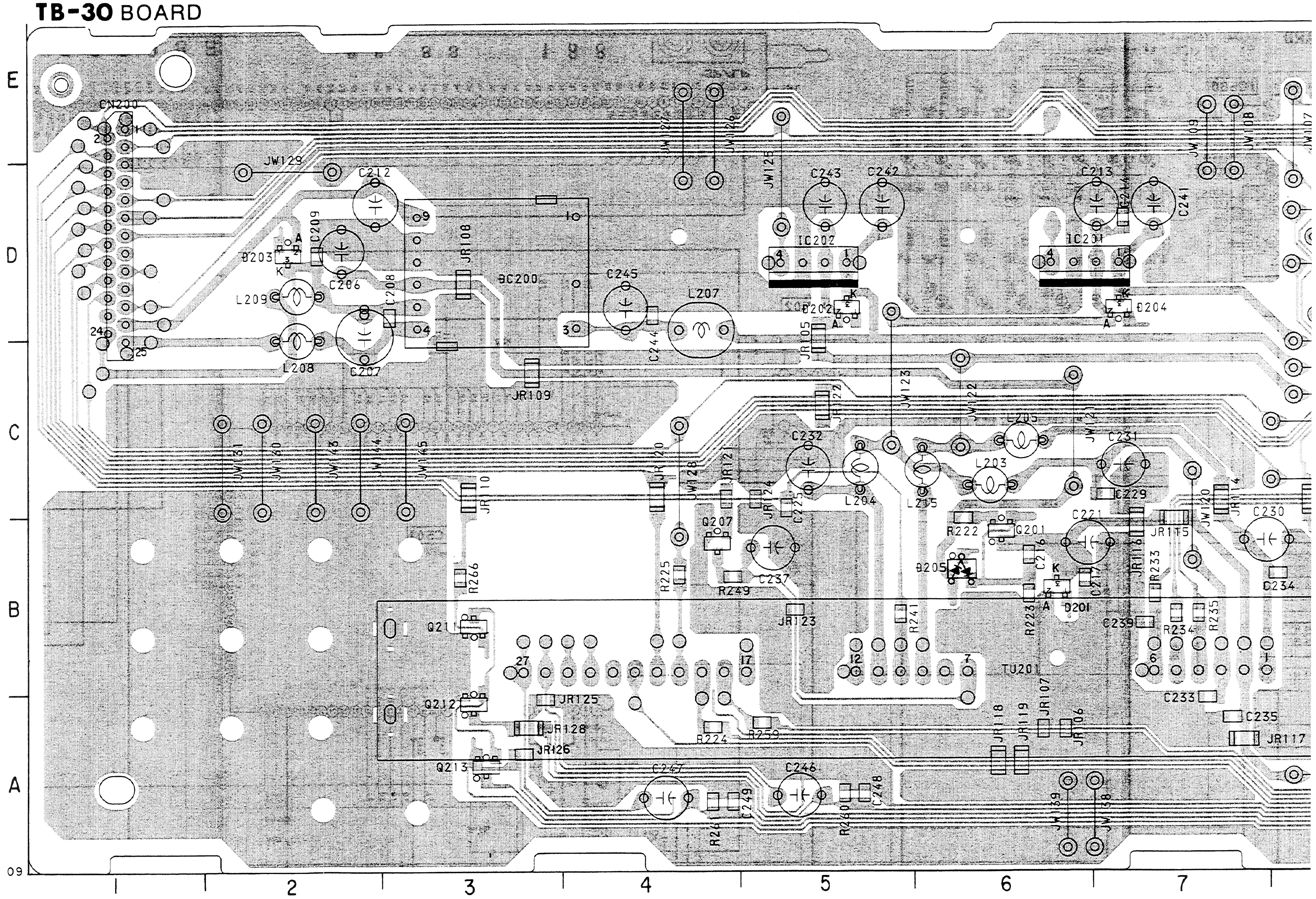
– Ref No. TB-30 BOARD: 7,000 series –

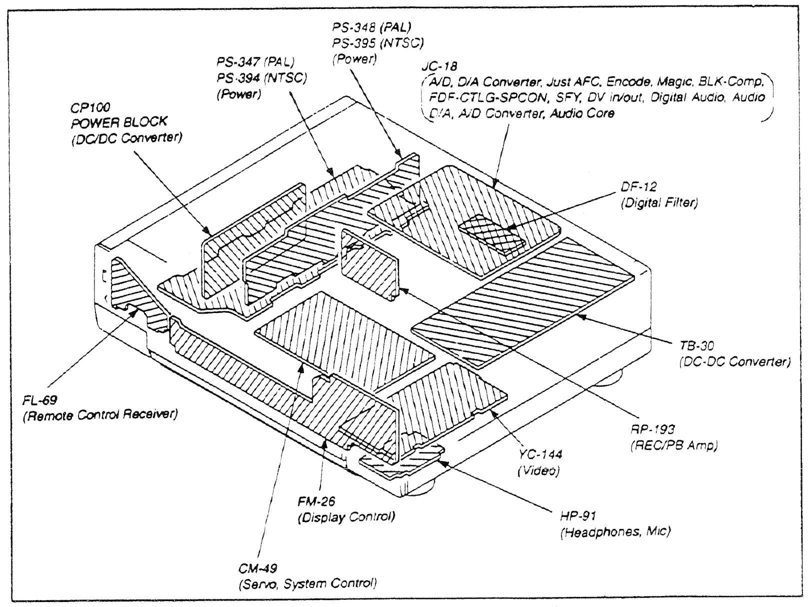
There are few cases that the part isn't mounted in this model is printed on this diagram.

- **For Printed Wiring Boards.**
- Chip transistor



TB-30 BOARD	
CN100	D-10
CN200	E-1
D203	D-2


TB-30 BOARD
E
D
C
B
A
09
2
3
4
5
6
7
CN200
JW129
C212
C209
D203
C206
C208
L209
L208
C207
JR108
BC200
C245
L207
C244
JR109
JW127
JW126
JW125
C243
C242
IC202
D202
JR105
C213
C241
IC201
D204
JW109
JW108
JW107
JW131
JW130
JW143
JW144
JW145
JR110
JR120
JW128
JR112
JR124
C232
C225
L204
L215
JW123
JW122
JR122
L205
L203
JW121
C231
C229
Q207
C237
R249
R225
R222
Q201
D205
C221
C216
C217
D201
R223
JR115
JR233
JW120
JR114
C230
C234
R266
Q211
Q212
Q213
JR125
JR128
JR126
27
17
12
7
6
JR123
R241
TU201
R234
R235
C239
C233
C235
JR117
JR118
JR119
JR107
JR106
R224
R259
C247
C249
C246
C248
R240
JW139
JW138

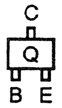

PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
(A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core)
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

C CONVERTER) PRINTED WIRING BOARD

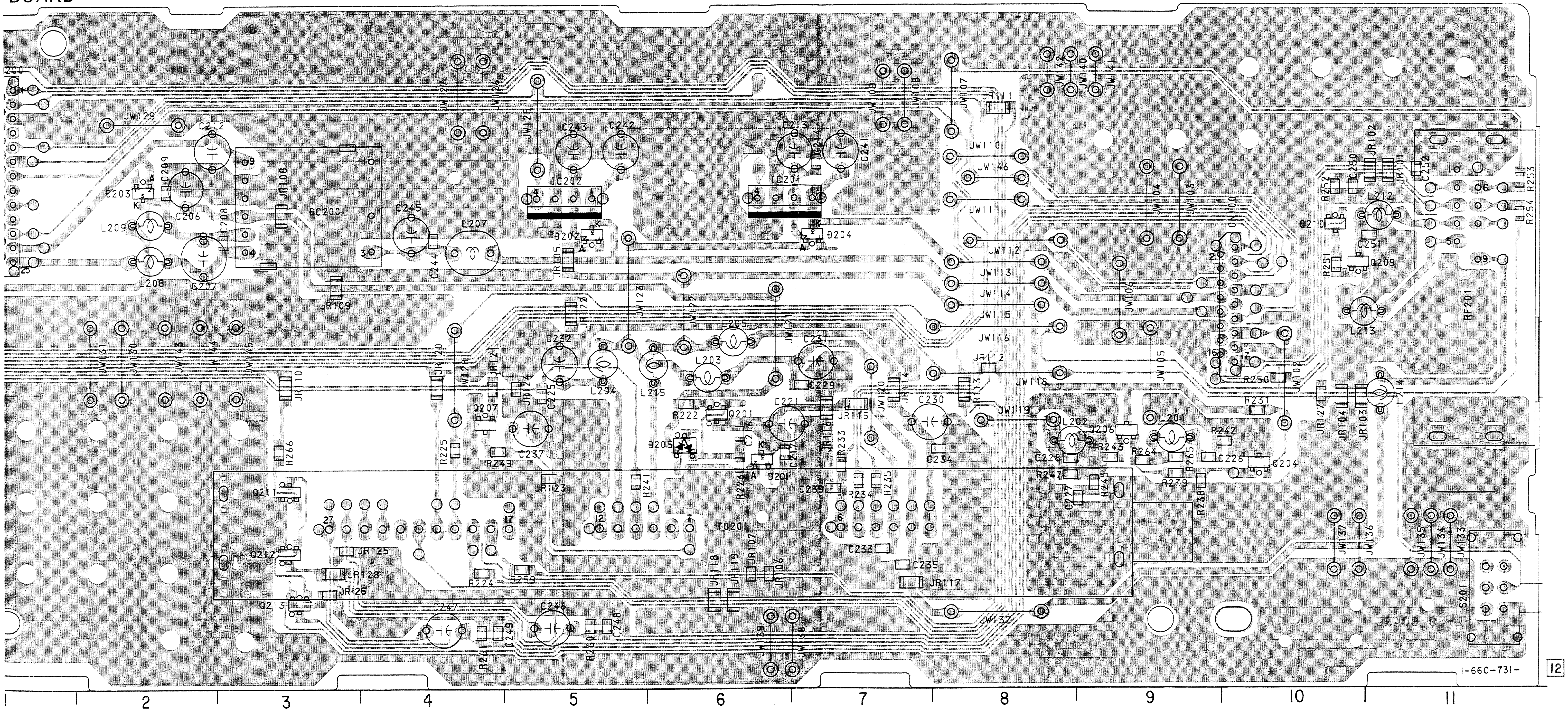
BOARD: 7,000 series –

There are few cases that the part isn't mounted in this model is printed on this diagram.

- **For Printed Wiring Boards.**
- Chip transistor

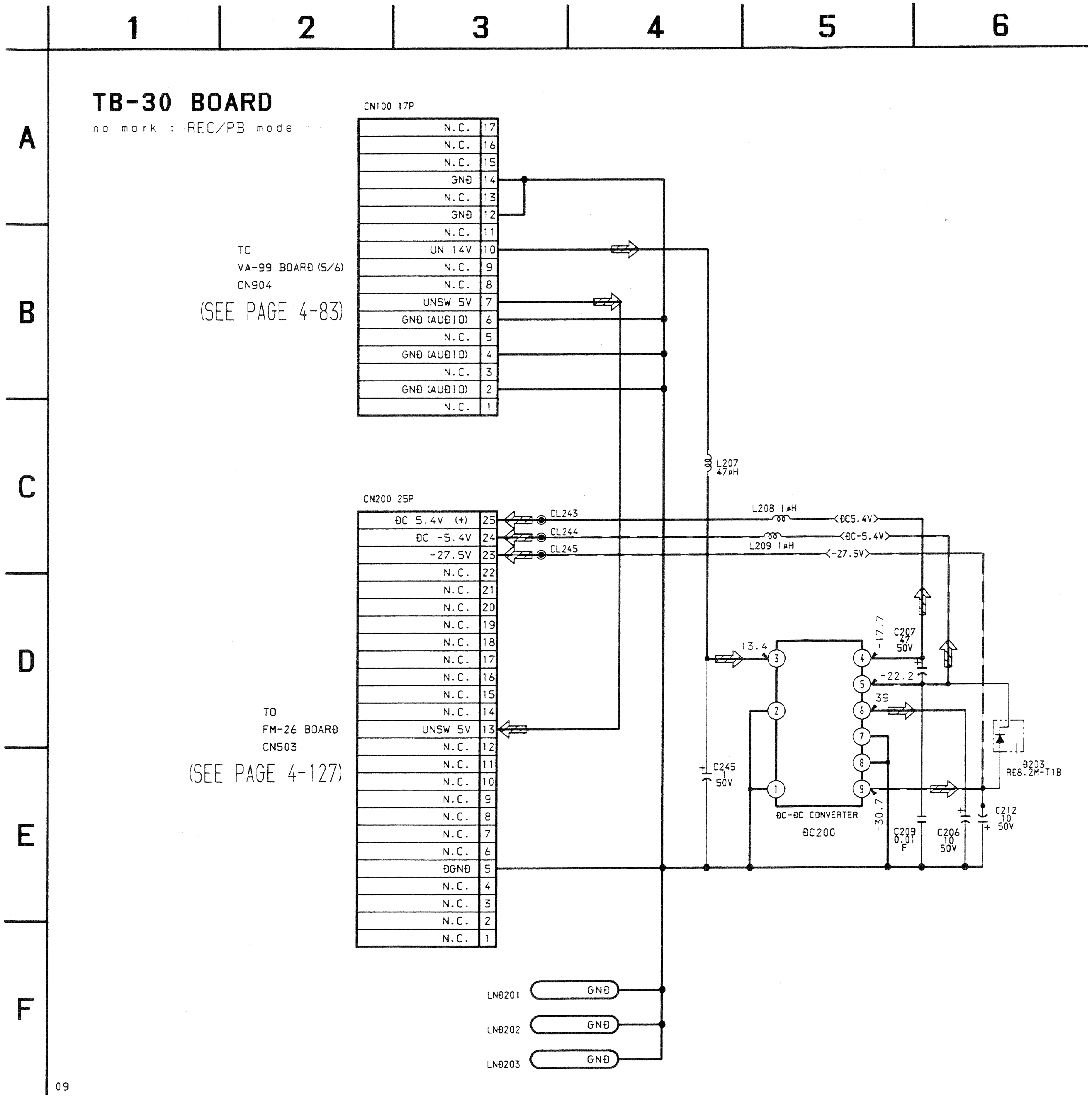


BOARD


CN200
JW129
C212
C209
D203
A
K
C206
L209
C208
L208
C207
JR108
BC200
C245
L207
C244
JW127
JW126
JW125
C243
C242
IC202
D202
JR105
C213
C214
C241
IC201
D204
JW109
JW108
JW107
JR111
JW110
JW146
JW111
JW112
JW113
JW114
JW115
JW116
JR112
JW118
JW119
JW142
JW140
JW141
JW104
JW103
CN100
JW106
JW105
JW102
R250
R231
R242
C226
Q204
R238
R279
R265
R264
R243
Q206
L201
L202
C228
R247
C227
R245
JR102
C250
JR101
C252
R252
L212
Q210
C251
R251
Q209
L213
RF201
R253
R254
JR127
JR104
JR103
L214
JW137
JW136
JW135
JW134
JW133
S201
JW131
JW130
JW143
JW144
JW145
JR110
JR120
JW128
JR121
JR124
C225
C232
L204
L215
L205
L203
JW123
JW122
JW121
C231
C229
JR122
R222
Q201
C221
C216
C217
D201
Q205
JR116
JR115
R233
JW120
JR114
C230
C234
JR113
Q207
C237
R249
R225
R266
JR123
R241
R223
C239
R234
R235
TU201
JR118
JR119
JR107
JR106
C233
C235
JR117
JW132
Q211
Q212
Q213
JR125
JR128
JR126
R224
R259
C247
C246
R261
C249
R260
C248
JW139
JW138
1-660-731-
12
2
3
4
5
6
7
8
9
10
11

TB-30 (DC-DC CONVERTER) SCHEMATIC DIAGRAM

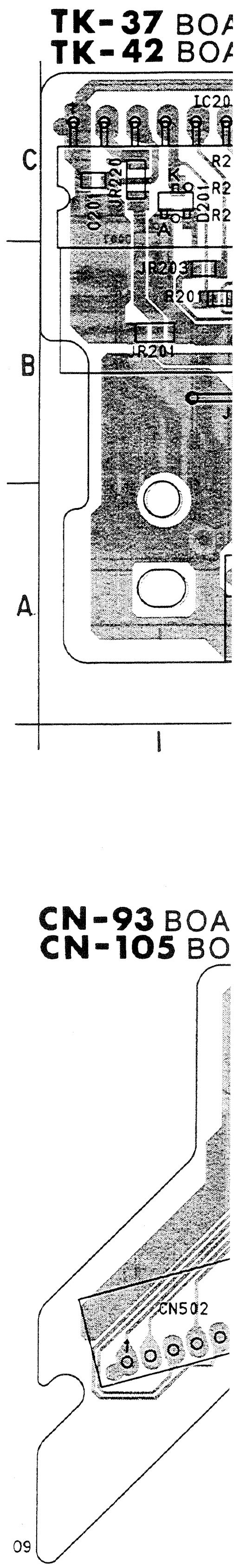
– Ref No. TB-30 BOARD: 7,000 series –


1
2
3
4
5
6
A
B
C
D
E
F
TB-30 BOARD
no mark : REC/PB mode
CN100 17P
N.C. 17
N.C. 16
N.C. 15
GND 14
N.C. 13
GND 12
N.C. 11
UN 14V 10
N.C. 9
N.C. 8
UNSW 5V 7
GND (AUDIO) 6
N.C. 5
GND (AUDIO) 4
N.C. 3
GND (AUDIO) 2
N.C. 1
TO
VA-99 BOARD (5/6)
CN904
(SEE PAGE 4-83)
CN200 25P
DC 5.4V (+) 25
DC -5.4V 24
-27.5V 23
N.C. 22
N.C. 21
N.C. 20
N.C. 19
N.C. 18
N.C. 17
N.C. 16
N.C. 15
N.C. 14
UNSW 5V 13
N.C. 12
N.C. 11
N.C. 10
N.C. 9
N.C. 8
N.C. 7
N.C. 6
DGND 5
N.C. 4
N.C. 3
N.C. 2
N.C. 1
TO
FM-26 BOARD
CN503
(SEE PAGE 4-127)
CL243
CL244
CL245
L207
47µH
L208 1µH
L209 1µH
(DC5.4V)
(DC-5.4V)
(-27.5V)
13.4
-17.7
C207
47
50V
-22.2
39
-30.7
C245
1
50V
DC-DC CONVERTER
DC200
C209
0.01
F
C206
10
50V
C212
10
50V
D203
RD8.2M-T1B
LND201
LND202
LND203
GND
GND
GND
09

TK-37 (PAL

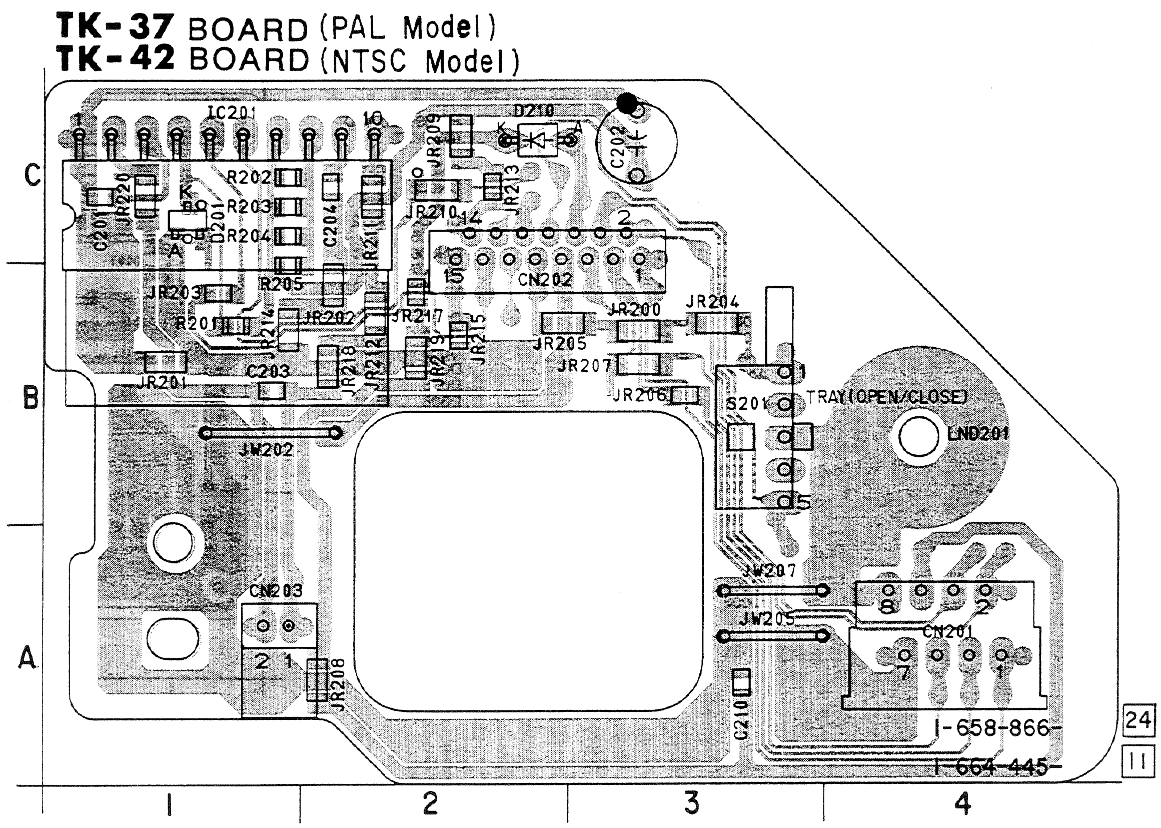
CN-105 (NTS

– Ref No. TK-37/


TK-37 BO
TK-42 BO
IC20
C
B
A
R2
R2
R2
R203
R201
R201
CN-93 BOA
CN-105 BO
CN502
1
09

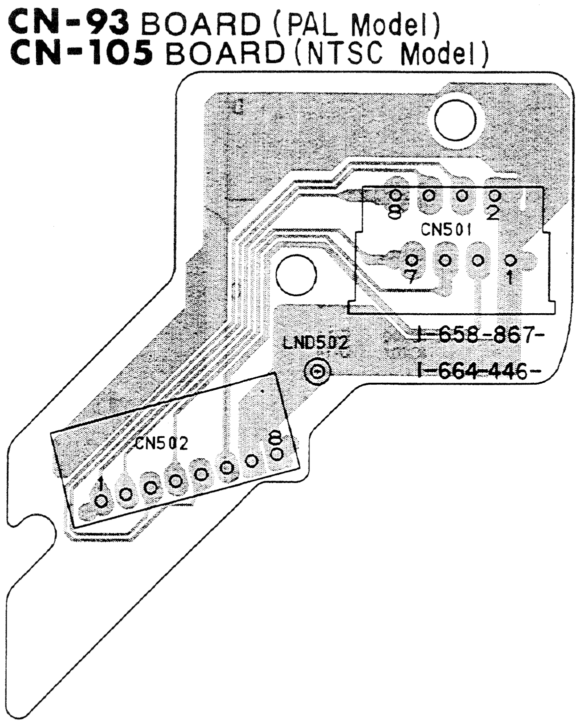
TK-37 (PAL Model)/TK-42 (NTSC Model) (TRAY MOTOR DRIVE), CN-93 (PAL Model)/ CN-105 (NTSC Model) (CONNECTOR) PRINTED WIRING BOARDS

– Ref No. TK-37/42, CN-93/105 BOARDS: 5,000 series –


TK-37 BOARD (PAL Model)
TK-42 BOARD (NTSC Model)
IC201
D210
C202
R202
R203
R204
R205
C204
C201
JR220
D201
K
A
JR209
JR210
JR213
JR211
CN202
14
15
2
1
JR203
R201
JR214
JR202
JR217
JR212
JR216
JR219
JR215
JR200
JR204
JR205
JR207
JR206
C203
JR201
S201
TRAY(OPEN/CLOSE)
LND201
JW202
JW207
JW205
CN203
2
1
JR208
CN201
8
7
C210
1-658-866-
1-664-445-
A
B
C
1
2
3
4

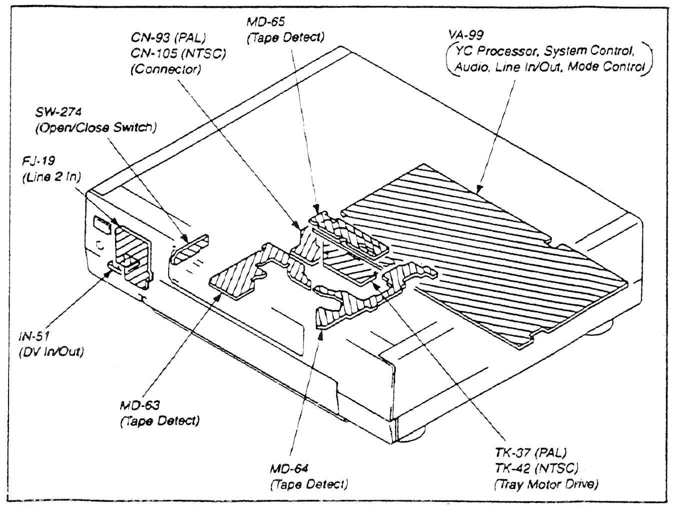
24 PAL Model

11 NTSC Model

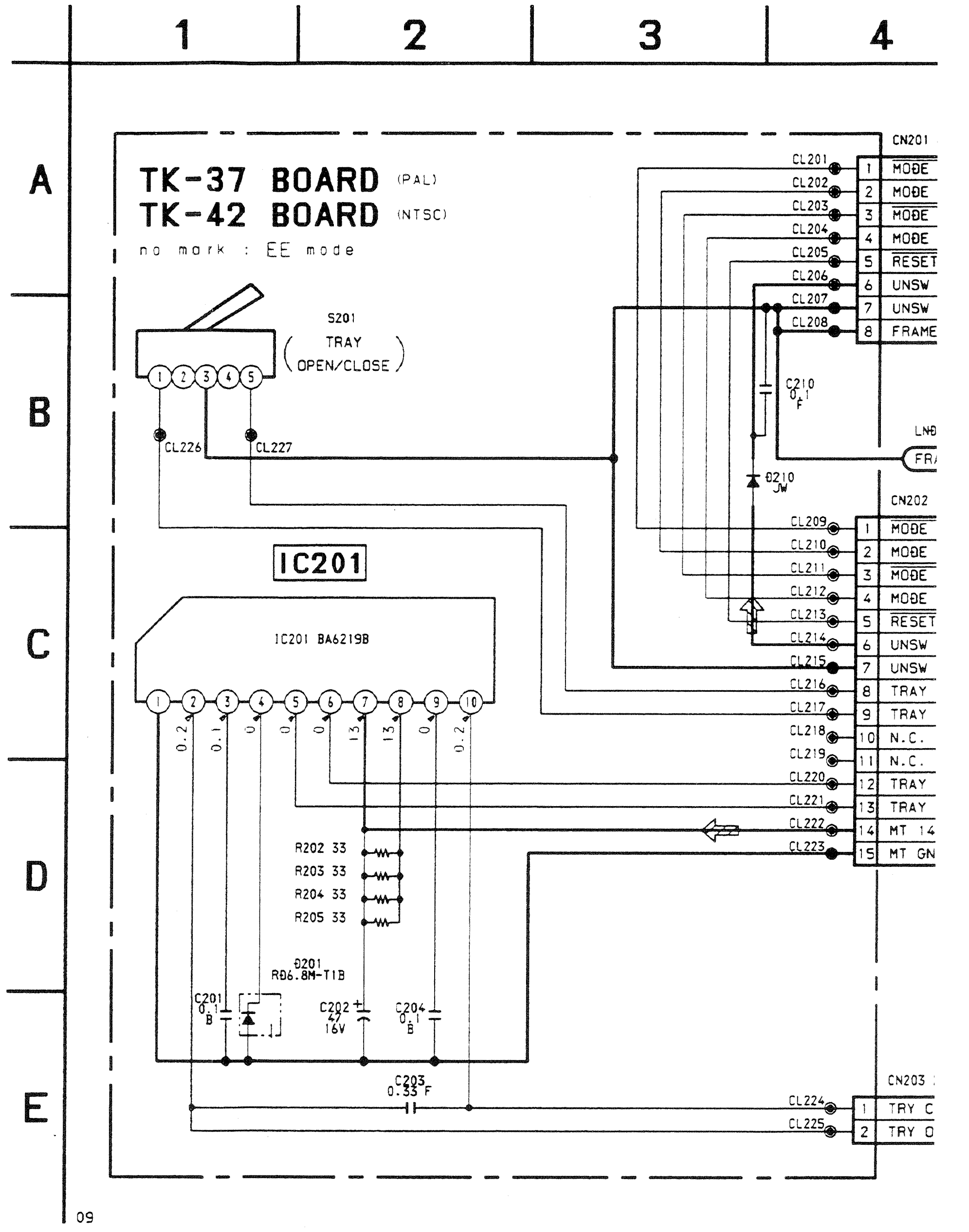

CN-93 BOARD (PAL Model)
CN-105 BOARD (NTSC Model)
CN501
8
2
7
1
LND502
1-658-867-
1-664-446-
CN502
1
8
09

24 PAL Model

11 NTSC Model

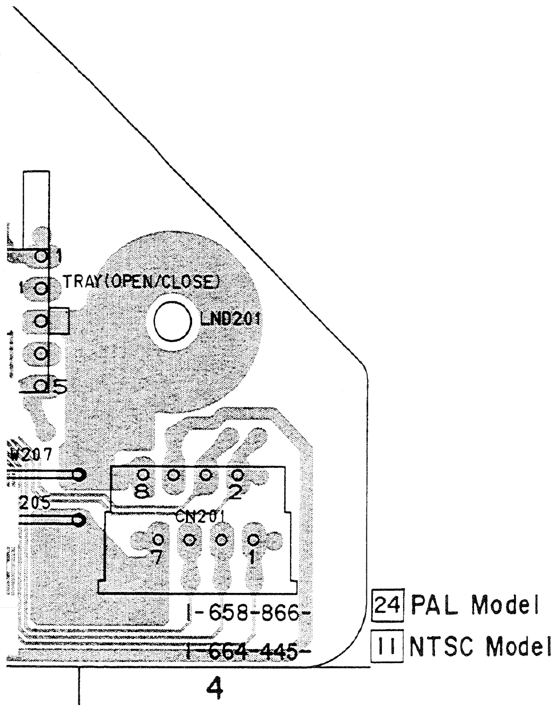

CN-93 (PAL)
CN-105 (NTSC)
(Connector)
MD-65
(Tape Detect)
VA-99
(YC Processor, System Control, Audio, Line In/Out, Mode Control)
SW-274
(Open/Close Switch)
FJ-19
(Line 2 In)
IN-51
(DV In/Out)
MD-63
(Tape Detect)
MD-64
(Tape Detect)
TK-37 (PAL)
TK-42 (NTSC)
(Tray Motor Drive)

– Ref No. TK-37/42, CN-93/105 BOARDS: 5,000 series –


1
2
3
4
A
B
C
D
E
TK-37 BOARD (PAL)
TK-42 BOARD (NTSC)
no mark : EE mode
S201
TRAY
OPEN/CLOSE
CL226
CL227
IC201
IC201 BA6219B
0.2
0.1
0
0
0
13
13
0
0.2
R202 33
R203 33
R204 33
R205 33
D201
RD6.8M-T1B
C201
0.1
B
C202
47
16V
C204
0.1
B
C203
0.33 F
C210
0.1
F
D210
JW
CN201
CL201
CL202
CL203
CL204
CL205
CL206
CL207
CL208
MODE
MODE
MODE
MODE
RESET
UNSW
UNSW
FRAME
LND
FRA
CN202
CL209
CL210
CL211
CL212
CL213
CL214
CL215
CL216
CL217
CL218
CL219
CL220
CL221
CL222
CL223
MODE
MODE
MODE
MODE
RESET
UNSW
UNSW
TRAY
TRAY
N.C.
N.C.
TRAY
TRAY
MT 14
MT GN
CN203
CL224
CL225
TRY C
TRY O
09

R DRIVE), CN-93 (PAL Model)/

BOARDS

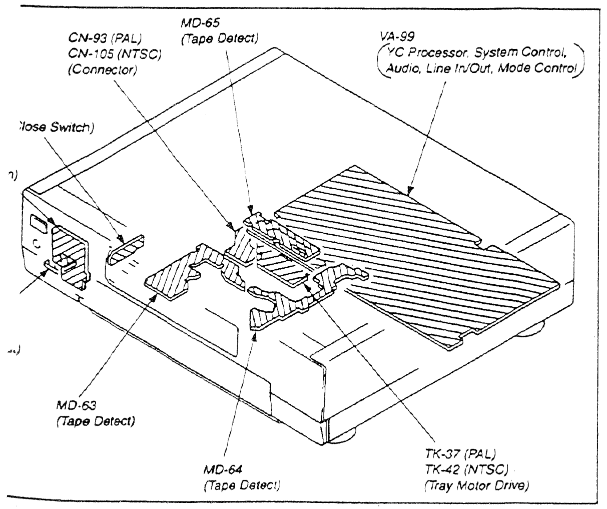

TRAY(OPEN/CLOSE)
LND201
CN201
8
2
7
1
207
205
1-658-866-
1-664-445-
4

24 PAL Model

11 NTSC Model

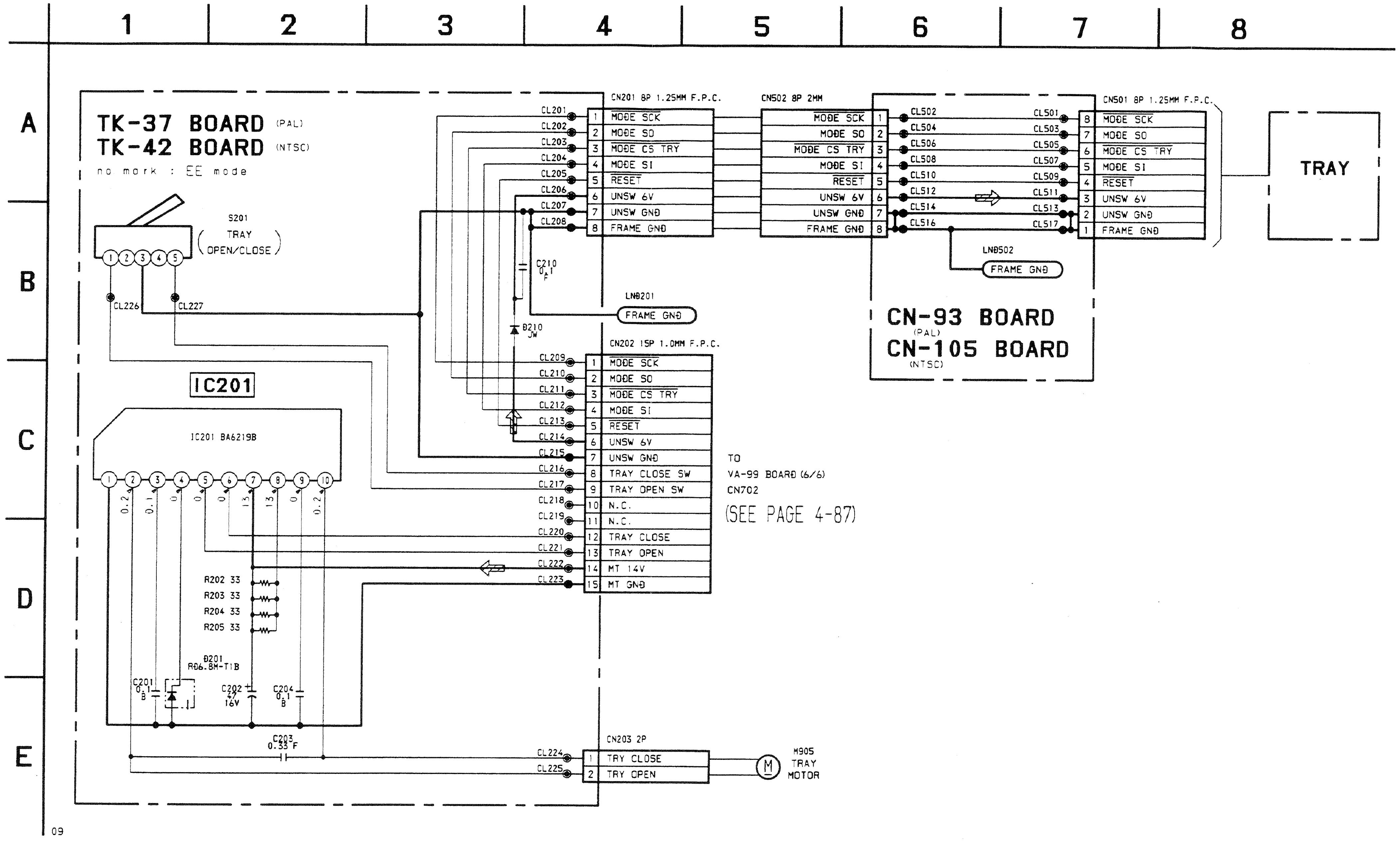
el

lodel


CN-93 (PAL)
CN-105 (NTSC)
(Connector)
MD-65
(Tape Detect)
VA-99
(YC Processor, System Control, Audio, Line In/Out, Mode Control)
lose Switch)
MD-63
(Tape Detect)
MD-64
(Tape Detect)
TK-37 (PAL)
TK-42 (NTSC)
(Tray Motor Drive)

TK-37 (PAL Model)/TK-42 (NTSC Model) (TRAY MOTOR DRIVE), CN-93 (PAL Model)/CN-105 (NTSC Model) (CONNECTOR) SCHEMATIC DIAGRAMS

– Ref No. TK-37/42, CN-93/105 BOARDS: 5,000 series –


1
2
3
4
5
6
7
8
A
B
C
D
E
TK-37 BOARD (PAL)
TK-42 BOARD (NTSC)
no mark : EE mode
S201
TRAY
OPEN/CLOSE
CL226
CL227
IC201
IC201 BA6219B
R202 33
R203 33
R204 33
R205 33
D201
RO6.8M-T1B
C201 0.1 B
C202 47 16V
C204 0.1 B
C203 0.33 F
C210 0.1 F
D210 JW
LND201
FRAME GND
CN201 8P 1.25MM F.P.C.
CL201
CL202
CL203
CL204
CL205
CL206
CL207
CL208
MODE SCK
MODE SO
MODE CS TRY
MODE SI
RESET
UNSW 6V
UNSW GND
FRAME GND
CN502 8P 2MM
CL502
CL504
CL506
CL508
CL510
CL512
CL514
CL516
CL501
CL503
CL505
CL507
CL509
CL511
CL513
CL517
CN501 8P 1.25MM F.P.C.
LND502
FRAME GND
CN-93 BOARD (PAL)
CN-105 BOARD (NTSC)
TRAY
CN202 15P 1.0MM F.P.C.
CL209
CL210
CL211
CL212
CL213
CL214
CL215
CL216
CL217
CL218
CL219
CL220
CL221
CL222
CL223
MODE SCK
MODE SO
MODE CS TRY
MODE SI
RESET
UNSW 6V
UNSW GND
TRAY CLOSE SW
TRAY OPEN SW
N.C.
N.C.
TRAY CLOSE
TRAY OPEN
MT 14V
MT GND
TO
VA-99 BOARD (6/6)
CN702
(SEE PAGE 4-87)
CN203 2P
CL224
CL225
TRY CLOSE
TRY OPEN
M905
TRAY
MOTOR
09

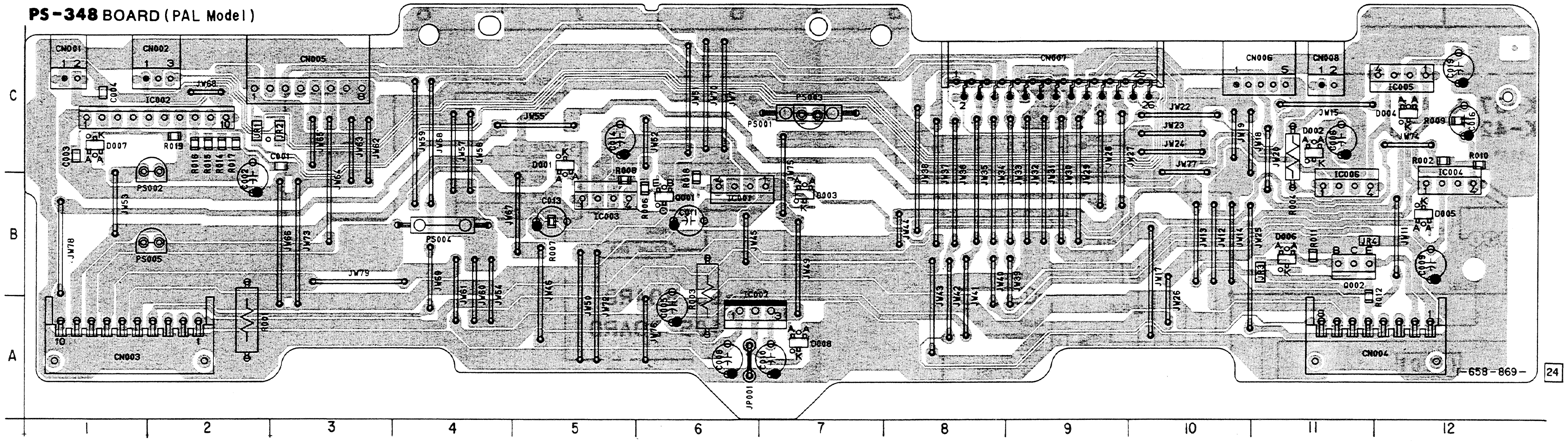
• **For Printed Wiring Boards.**

There are few cases that the part isn't mounted in this model is printed on this diagram.

PS-347, 348 (PAL Model) (POWER) PRINTED WIRING BOARDS

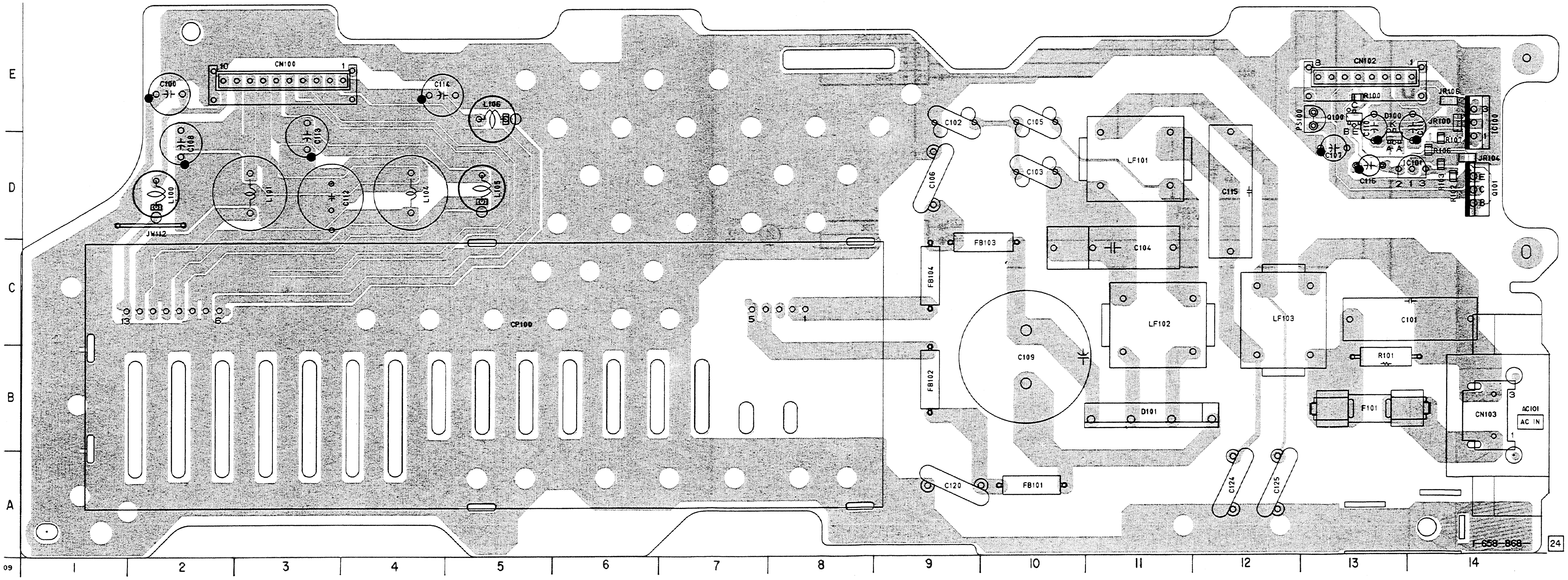
– Ref No. PS-347, 348 BOARDS: 9,000 series –

PS-348 BOARD (PAL Model)



C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
CN001
CN002
CN005
CN007
CN006
CN008
CN003
CN004
IC001
IC002
IC003
IC004
IC005
IC006
IC007
PS001
PS002
PS003
PS004
PS005
D001
D002
D003
D004
D005
D006
D007
D008
Q001
Q002
R001
R002
R003
R007
R009
R010
R011
R012
C001
C003
C004
C013
C016
C018
C019
JW22
JW23
JW24
JW27
JW55
JW68
JW73
JW74
JW78
JW79
JP001
1-658-869-
24

PS-347 BOARD (PAL Model)



E
D
C
B
A
1
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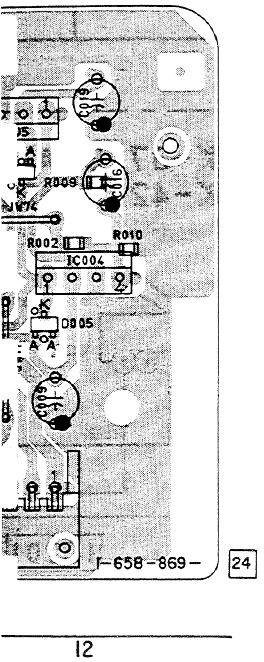
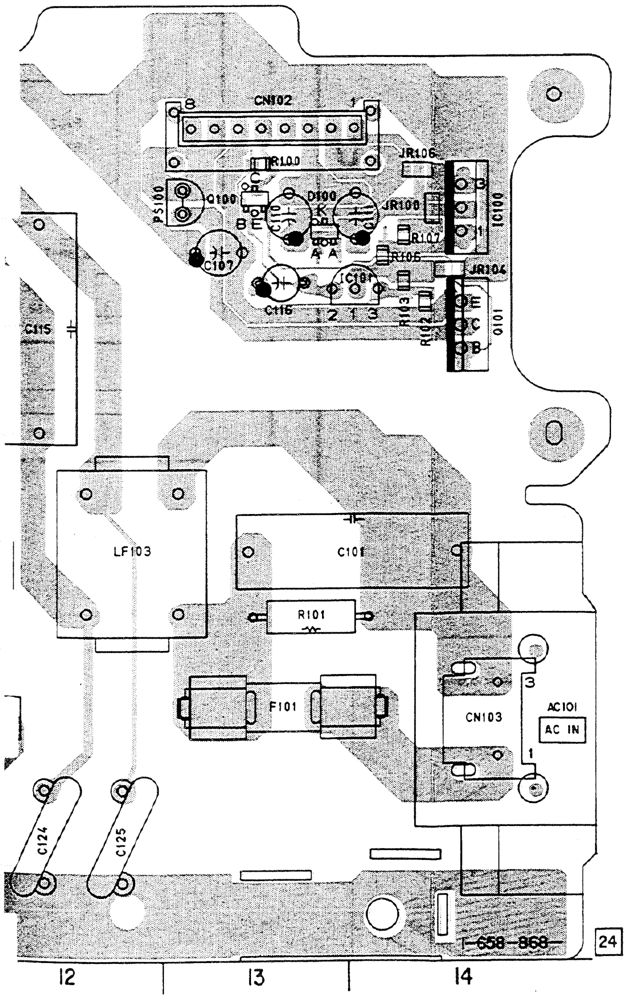
4
5
6
7
8
9
10
11
12
13
14
CN100
CN102
CN103
CP100
C100
C101
C102
C103
C104
C105
C106
C107
C109
C111
C112
C113
C114
C115
C116
C120
C124
C125
L100
L101
L104
L105
L106
LF101
LF102
LF103
FB101
FB102
FB103
FB104
D100
D101
Q100
Q101
IC101
IC100
R100
R101
R107
F101
PS100
JR100
JR104
JR105
JR106
JW112
AC101
AC IN
1-658-868-
24
09


R009
R002
R010
IC004
D005
1-658-869-
24
12


CN102
PS100
Q100
D100
JR106
JR100
C107
C116
IC100
JR104
Q101
C115
LF103
C101
R101
F101
CN103
AC101
AC IN
C124
C125
1-658-868-
24
12
13
14

PS-348 BOARD (DSR-30P)	
CN001	C-1
CN002	C-2
CN003	A-1
CN004	A-12
CN005	C-3
CN006	C-11
CN007	C-9
CN008	C-11
D001	C-5
D002	C-11
D003	B-7
D004	C-12
D005	B-12
D006	B-11
D007	C-1
IC001	B-6
IC002	C-1
IC003	B-5
IC004	B-12
IC005	C-12
IC006	B-11
IC007	A-6
Q001	B-6
Q002	B-11

PS-395 BOARD (DSR-30)	
CN001	C-1
CN002	C-2
CN003	A-1
CN004	A-12
CN005	C-3
CN006	C-11
CN007	C-9
CN008	C-11
D001	C-5
D002	C-11
D003	B-7
D004	C-12
D005	B-12
D006	B-11
D007	C-1
IC001	B-6
IC002	C-1
IC003	B-5
IC004	B-12
IC005	C-12
IC006	B-11
IC007	A-6
Q001	B-6
Q002	B-11

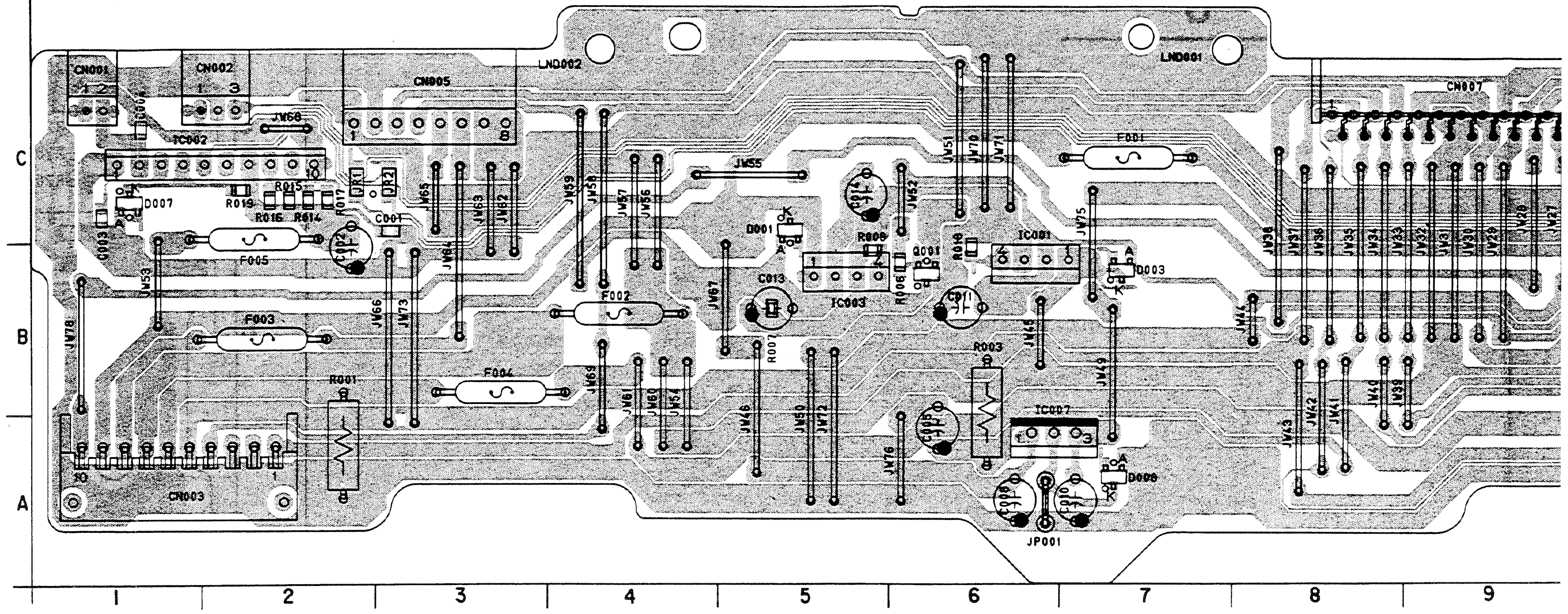
PS-347 BOARD (DSR-30P)	
CN100	E-3
CN102	E-13
D100	D-13
D101	B-11
IC100	E-14
IC101	D-14
Q100	E-13
Q101	D-14

PS-394 BOARD (DSR-30)	
CN100	E-3
CN102	E-13
D100	D-14
D101	B-10
IC100	E-14
IC101	D-14
Q100	E-13
Q101	D-14

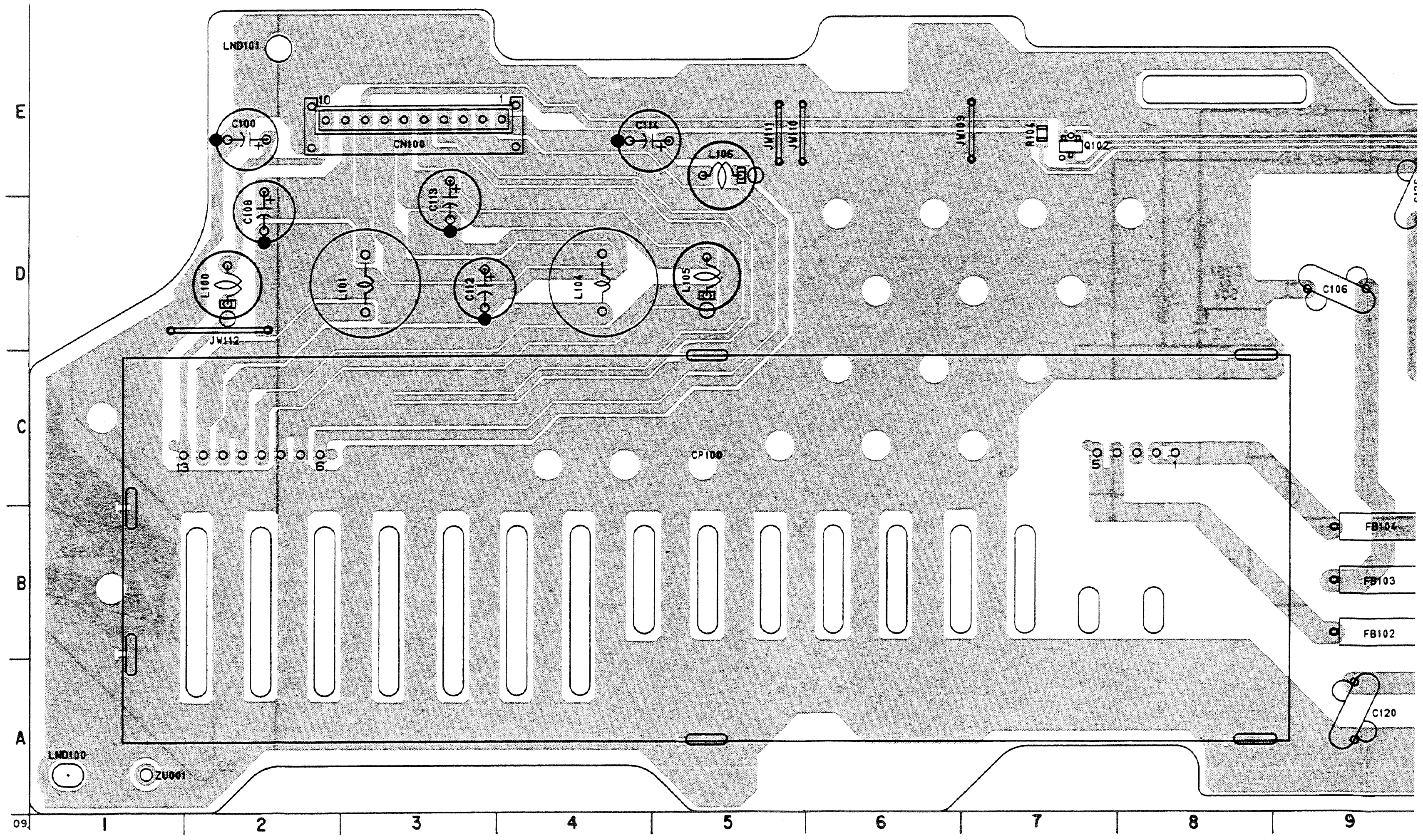
PS-394, 395 (NTSC Model) (POWER), SW-274 (OPEN/CLOSE SWITCH) PRINTED WIRING BOARDS

– Ref No. PS-394, 395 BOARDS: 9,000 series –

PS-395 BOARD (NTSC Model)


CN001
CN002
CN005
IC002
JW60
R015
R016
R014
R019
D007
C001
F005
F003
F004
R001
CN003
F002
JW55
D001
R009
IC003
C013
R007
R003
IC001
D003
F001
LND002
LND001
CN007
IC007
D009
JP001
A
B
C
1
2
3
4
5
6
7
8
9

PS-394 BOARD (NTSC Model)


LND101
CN100
C100
C108
L100
L101
C113
C112
L104
C114
L106
L105
JW112
R104
Q102
C106
CP100
FB104
FB103
FB102
C120
LND100
ZU001
A
B
C
D
E
1
2
3
4
5
6
7
8
9

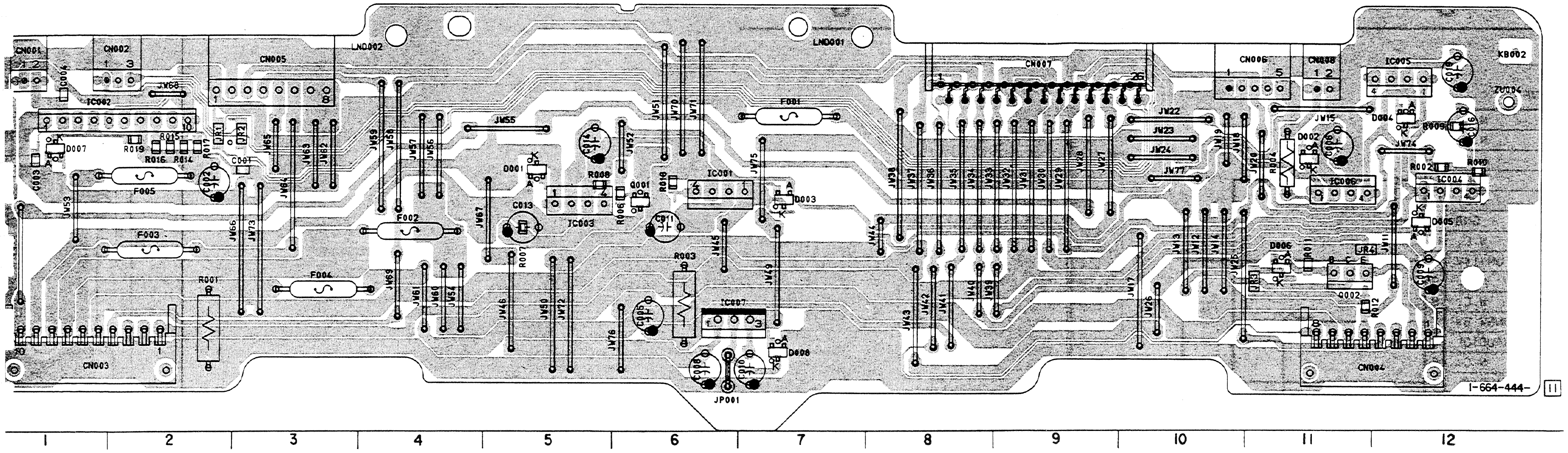
-394, 395 (NTSC Model) (POWER), SW-274 (OPEN/CLOSE SWITCH) PRINTED WIRING BOARDS

-f No. PS-394, 395 BOARDS: 9,000 series –

- For Printed Wiring Boards.

There are few cases that the part isn't mounted in this model is printed on this diagram.

S-395 BOARD (NTSC Model)


CN001
CN002
CN005
LND002
LND001
CN007
CN006
CN008
IC005
KB002
IC002
D007
R019
R016
R014
F005
F003
F002
F004
F001
R001
CN003
IC001
IC003
IC007
IC004
IC006
D001
D003
D002
D004
D005
D006
D008
Q001
Q002
R002
R003
R006
R007
R008
R010
R012
JP001
CN004
ZU004
1-664-444-
11
1
2
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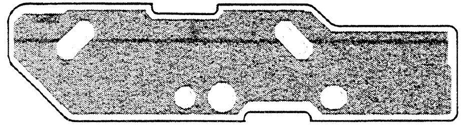
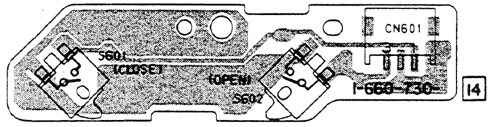
4
5
6
7
8
9
10
11
12

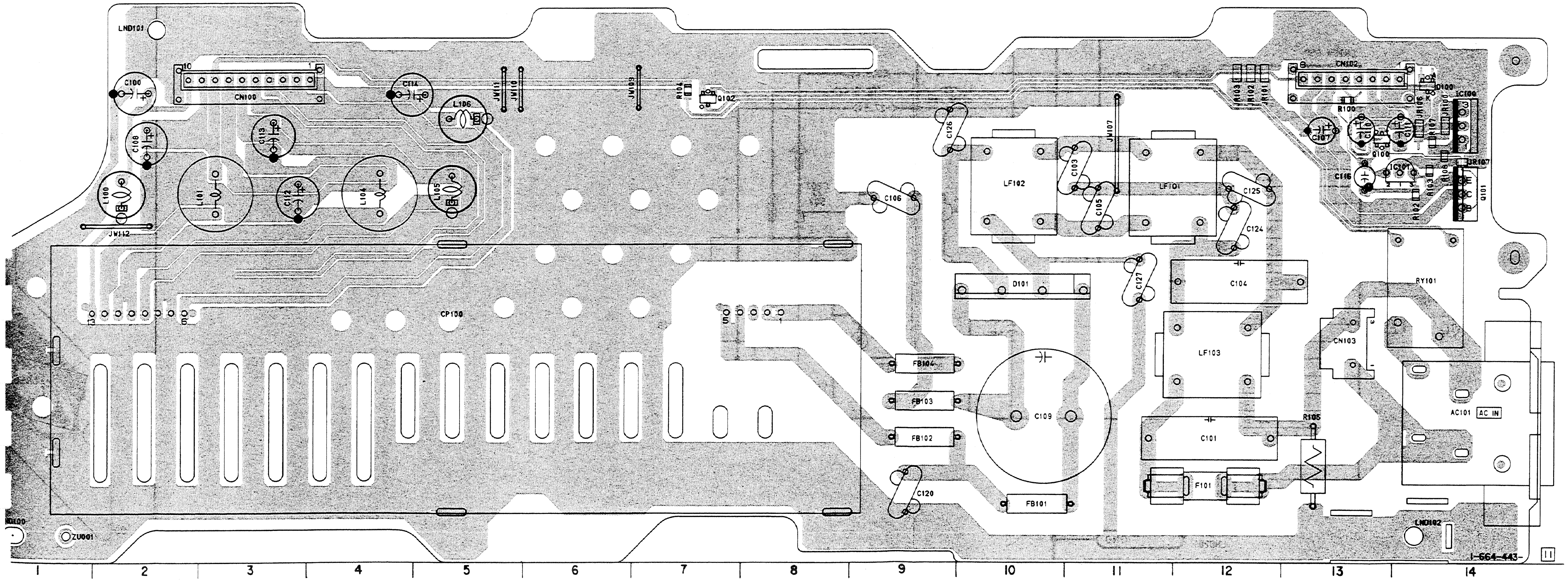
SW-274 BOARD (SIDE B)



SW-274 BOARD (SIDE A)


CN601
S601
(CLOSE)
(OPEN)
S602
1-660-730-
14

-394 BOARD (NTSC Model)


LND101
C100
CN100
C114
JW111
JW110
JW108
R104
Q102
L106
C108
C113
L100
L101
C112
L104
L105
JW112
CP100
C126
JW107
LF102
LF101
C103
C105
C106
C125
C124
C127
D101
C104
LF103
FB104
FB103
FB102
FB101
C109
C120
C101
F101
R105
CN102
R100
IC100
D100
C107
C116
Q100
IC101
Q101
R103
R102
R101
RY101
CN103
AC101
AC IN
LND102
ZU001
1-664-443-
11
1
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7
8
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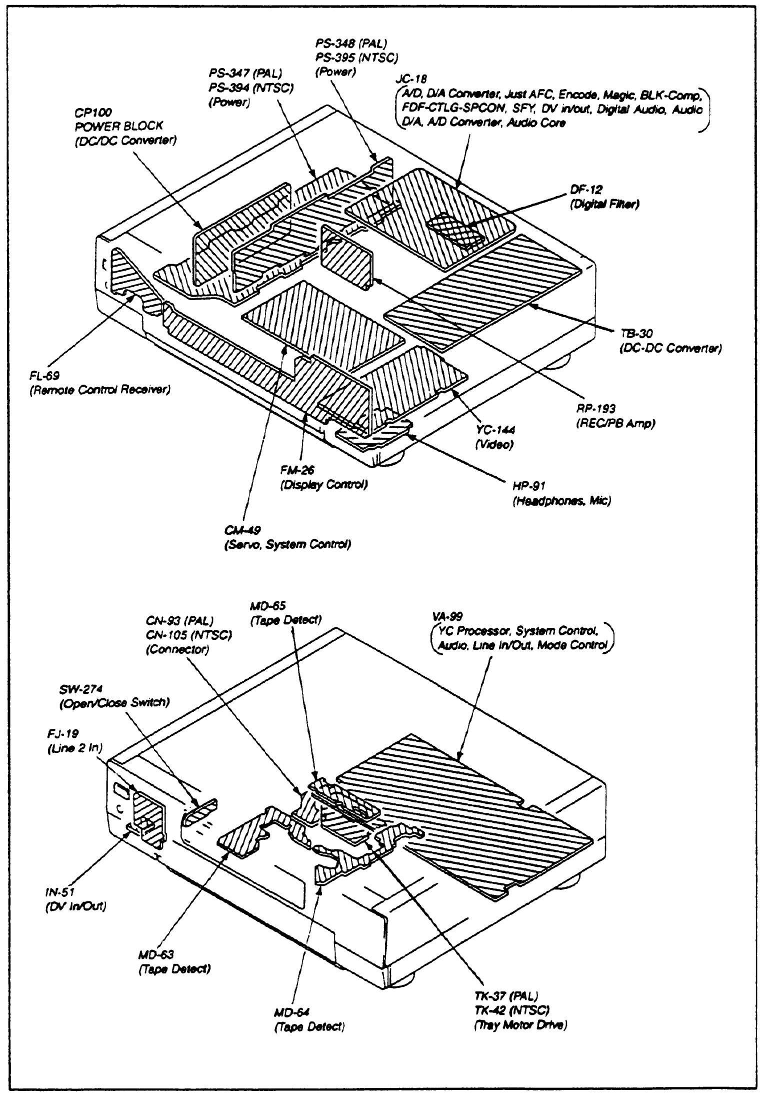
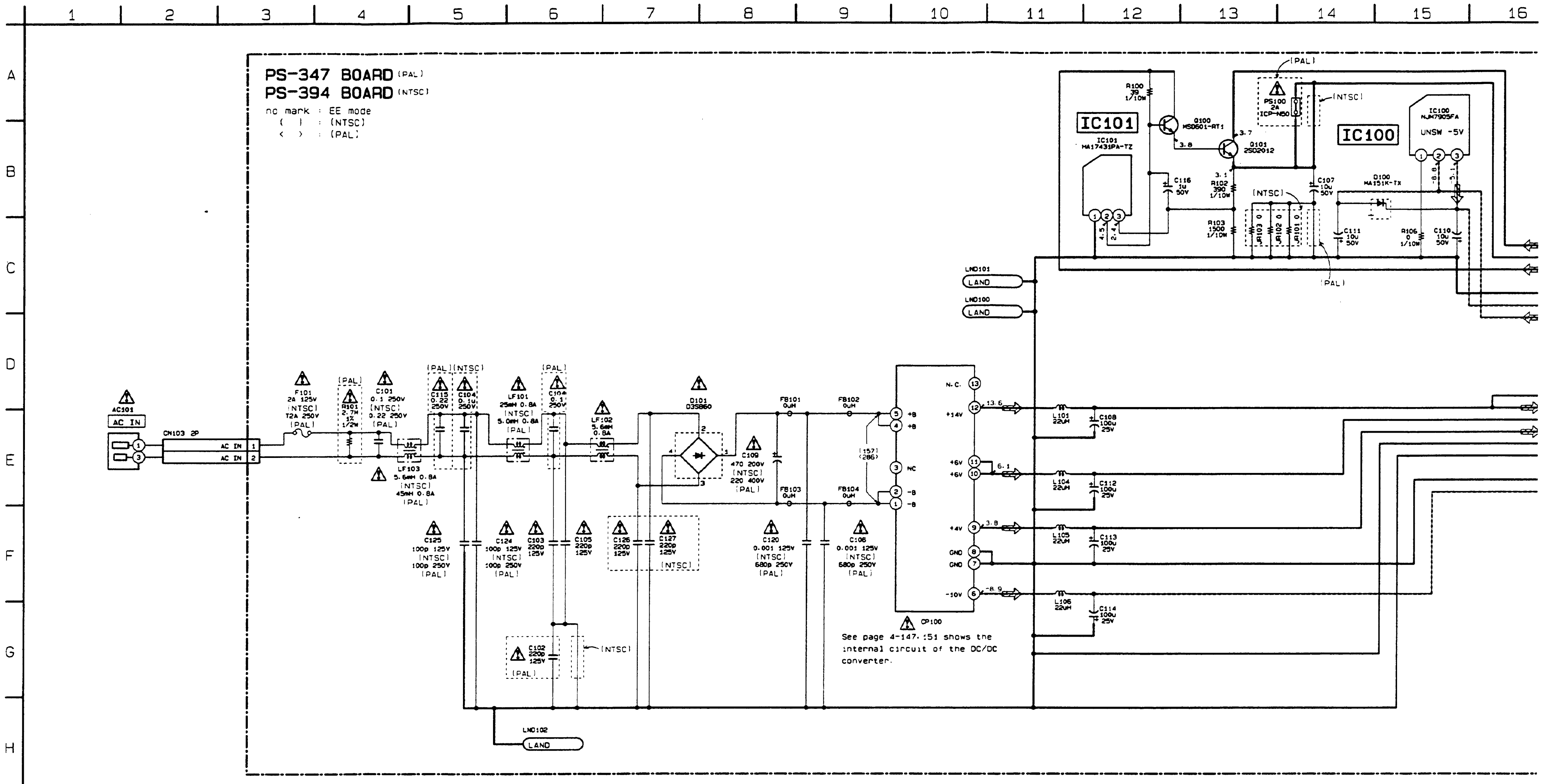
14


PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
(A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core)
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)
CN-93 (PAL)
CN-105 (NTSC)
(Connector)
MD-65
(Tape Detect)
VA-99
(YC Processor, System Control, Audio, Line In/Out, Mode Control)
SW-274
(Open/Close Switch)
FJ-19
(Line 2 In)
IN-51
(DV In/Out)
MD-63
(Tape Detect)
MD-64
(Tape Detect)
TK-37 (PAL)
TK-42 (NTSC)
(Tray Motor Drive)

PS-347, 348 (PAL Model), PS-394, 395 (NTSC Model) (POWER), SW-274 (OPEN/CLOSE SWITCH) SCHEMATIC DIAGRAMS

– Ref No. PS-348, 349/394, 395; SW-274 BOARDS: 9,000 series –


1
2
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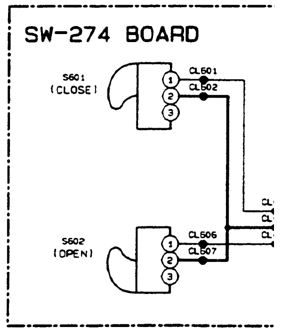
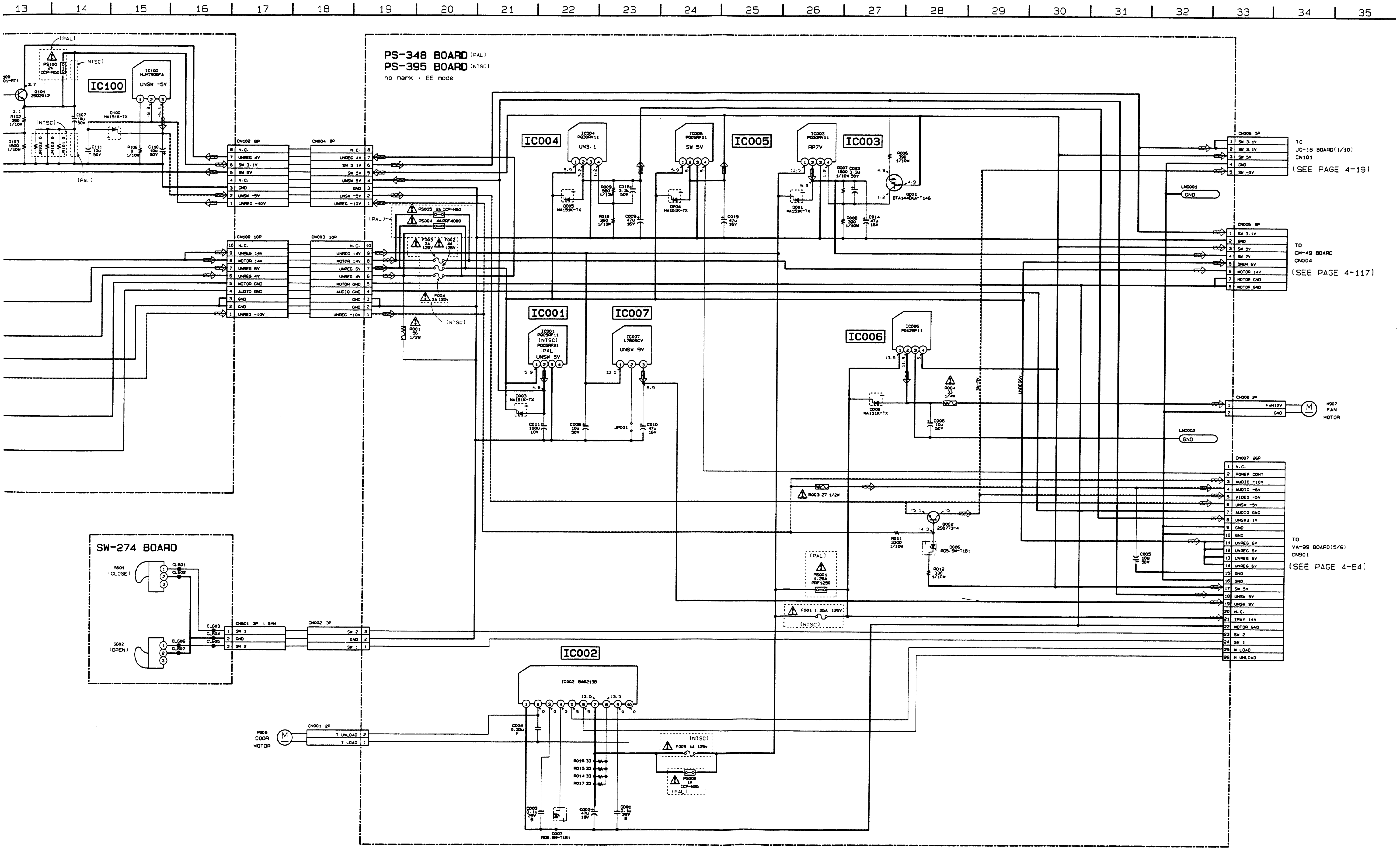
11
12
13
14
15
16
A
B
C
D
E
F
G
H
PS-347 BOARD (PAL)
PS-394 BOARD (NTSC)
no mark : EE mode
( ) : (NTSC)
< > : (PAL)
AC101
AC IN
CN103 2P
AC IN
F101
2A 125V
(NTSC)
T2A 250V
(PAL)
R101
2.7M
1%
1/2W
C101
0.1 250V
(NTSC)
0.22 250V
(PAL)
LF103
5.6mH 0.8A
(NTSC)
45mH 0.8A
(PAL)
C115
0.22
250V
C104
0.1u
250V
LF101
25mH 0.8A
(NTSC)
5.0mH 0.8A
(PAL)
LF102
5.6mH
0.8A
D101
D3SB60
C109
470 200V
(NTSC)
220 400V
(PAL)
FB101
0uH
FB102
0uH
FB103
0uH
FB104
0uH
(157)
<286>
C125
100p 125V
(NTSC)
100p 250V
(PAL)
C124
100p 125V
(NTSC)
100p 250V
(PAL)
C103
220p
125V
C105
220p
125V
C126
220p
125V
C127
220p
125V
(NTSC)
C120
0.001 125V
(NTSC)
680p 250V
(PAL)
C106
0.001 125V
(NTSC)
680p 250V
(PAL)
C102
220p
125V
(PAL)
(NTSC)
LND102
LAND
LND101
LAND
LND100
LAND
CP100
N.C.
+B
+B
NC
-B
-B
+14V
+6V
+6V
+4V
GND
GND
-10V
13.6
6.1
3.8
-8.9
See page 4-147. 151 shows the internal circuit of the DC/DC converter.
L101
22uH
C108
100u
25V
L104
22uH
C112
100u
25V
L105
22uH
C113
100u
25V
L106
22uH
C114
100u
25V
IC101
IC101
MA17431PA-TZ
R100
39
1/10W
Q100
MSD601-RT1
Q101
2SD2012
3.8
3.7
3.1
4.5
2.4
C116
1u
50V
R102
390
1/10W
R103
1500
1/10W
JR103 0
JR102 0
JR101 0
(NTSC)
(PAL)
PS100
2A
ICP-N50
(PAL)
(NTSC)
C107
10u
50V
IC100
IC100
NJM7905FA
UNSW -5V
-8.8
-5.1
D100
MA151K-TX
C111
10u
50V
R106
0
1/10W
C110
10u
50V

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.


SW-274 BOARD
S601
(CLOSE)
S602
(OPEN)
CL601
CL602
CL606
CL607

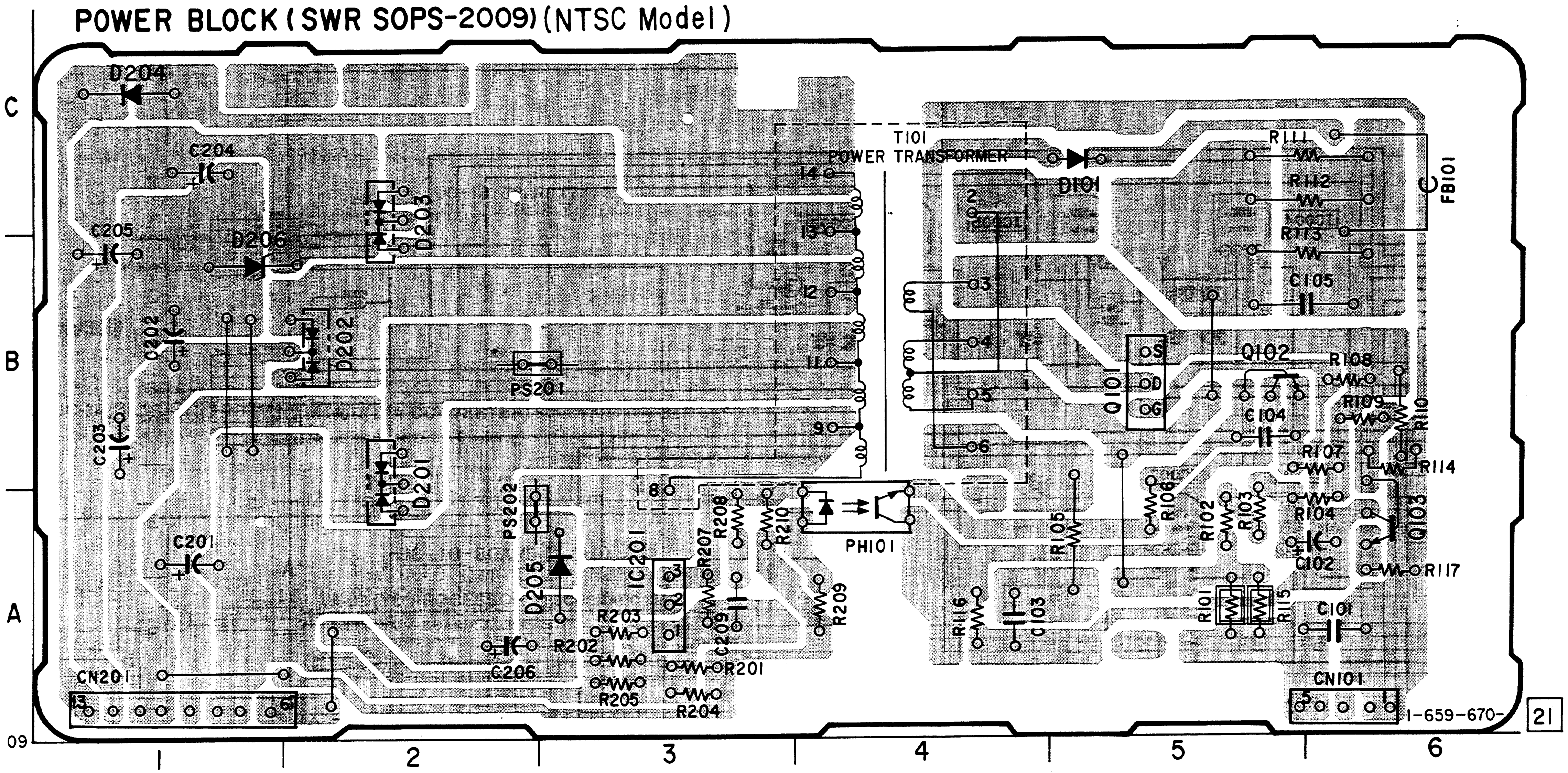

13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
PS-348 BOARD (PAL)
PS-395 BOARD (NTSC)
no mark : EE mode
IC100
IC100 NJM7905FA
UNSW -5V
PS100 2A ICP-N50
(PAL)
(NTSC)
Q101 2SD2012
D100 MA151K-TX
CN102 8P
CN004 8P
N.C.
UNREG 4V
SW 3.1V
SW 5V
GND
UNSW -5V
UNREG -10V
CN100 10P
CN003 10P
UNREG 14V
MOTOR 14V
UNREG 6V
MOTOR GND
AUDIO GND
PS005 2A ICP-N50
PS004 4A PRF4000
F003 2A 125V
F002 4A 125V
F004 2A 125V
R001 56 1/2W
IC004
IC004 PQ30RV11
UN3.1
IC005
IC005 PQ05RF11
SW 5V
IC003
IC003 PQ30RV11
RP7V
D005 MA151K-TX
D004 MA151K-TX
D001 MA151K-TX
Q001 DTA144EKA-T146
IC001
IC001 PQ05RF11 (NTSC) PQ05RF21 (PAL)
UNSW 5V
IC007
IC007 L7809CV
UNSW 9V
IC006
IC006 PQ12RF11
D003 MA151K-TX
D002 MA151K-TX
R004 33 1/4W
CN006 5P
SW 3.1V
SW 5V
GND
SW -5V
TO JC-18 BOARD(1/10) CN101
(SEE PAGE 4-19)
LND001 GND
CN005 8P
SW 7V
DRUM 6V
MOTOR 14V
MOTOR GND
TO CM-49 BOARD CN004
(SEE PAGE 4-117)
CN008 2P
FAN12V
M907 FAN MOTOR
LND002 GND
CN007 26P
POWER CONT
AUDIO -10V
AUDIO -6V
VIDEO -5V
UNSW -5V
AUDIO GND
UNSW3.1V
UNREG 6V
UNSW 5V
UNSW 9V
TRAY 14V
SW 2
SW 1
M LOAD
M UNLOAD
TO VA-99 BOARD(5/6) CN901
(SEE PAGE 4-84)
R003 27 1/2W
Q002 2SD773-4
R011 3300 1/10W
D006 RD5.6M-T1B1
R012 330 1/10W
PS001 1.25A PRF1250
F001 1.25A 125V
SW-274 BOARD
S601 (CLOSE)
S602 (OPEN)
CL601
CL602
CL603
CL604
CL605
CL606
CL607
CN601 3P 1.5MM
CN002 3P
IC002
IC002 BA6219B
M906 DOOR MOTOR
CN001 2P
T UNLOAD
T LOAD
F005 1A 125V
PS002 1A ICP-N25
R016 33
R015 33
R014 33
R017 33
D007 RD5.6M-T1B1

POWER, OPEN/CLOSE SWITCH

PS-347, 394/PS-348, 395, SW-274

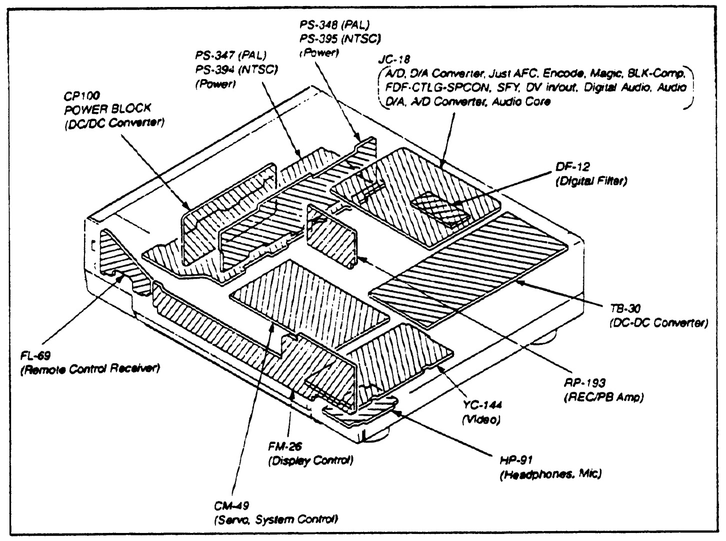
POWER BLOCK (DC-DC CONVERTER) (SWP SOPS-2009) (NTSC Model) PRINTED WIRING BOARD

– Ref No. POWER BLOCK BOARD: 10,000 series –


POWER BLOCK (SWR SOPS-2009) (NTSC Model)
C
B
A
09
1
2
3
4
5
6
D204
C204
C205
D206
D203
C202
D202
PS201
C203
D201
C201
PS202
D205
IC201
R203
R202
C206
R205
R204
R201
R207
R208
R209
R210
C209
CN201
13
6
T101
POWER TRANSFORMER
14
13
12
11
9
8
2
3
4
5
6
PH101
D101
R111
R112
R113
C105
FB101
Q101
S
D
G
Q102
R108
R109
R110
C104
R107
R114
R106
R105
R102
R103
R104
C102
Q103
R117
R116
C103
R101
R115
C101
CN101
5
1
1-659-670-
21

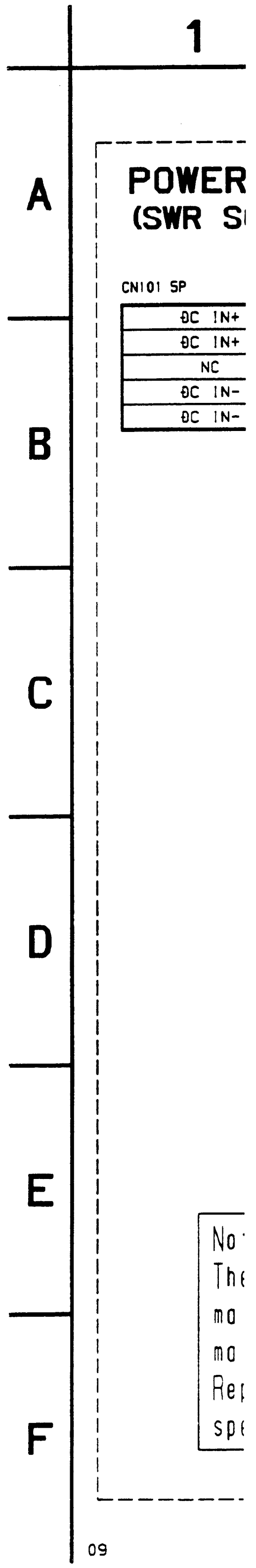
POWER BLOCK
(DSR-30)

CN101	A-6
CN201	A-1
D101	C-5
D201	A-2
D202	B-2
D203	C-2
D204	C-1
D205	A-3
D206	B-1
IC201	A-3
Q101	B-5
Q102	B-5
Q103	A-6


PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

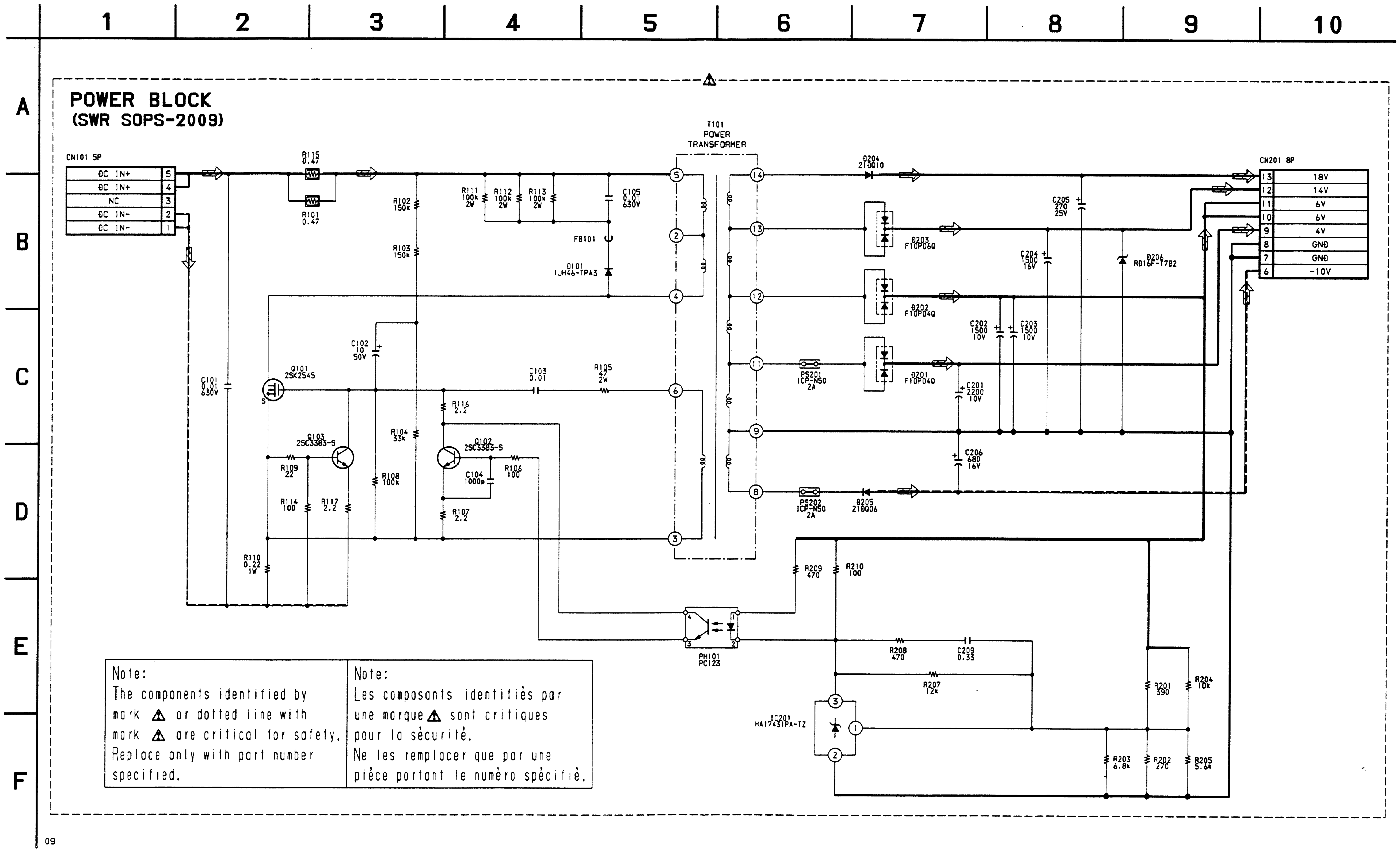
POWER BLOCK (I

– Ref No. POWER BLOC


1
A
B
C
D
E
F
POWER
(SWR S
CN101 SP
ƏC IN+
ƏC IN+
NC
ƏC IN-
ƏC IN-
No
The
mo
mo
Re
sp
09

POWER BLOCK (DC-DC CONVERTER) (SWP SOPS-2009) (NTSC Model) SCHEMATIC DIAGRAM

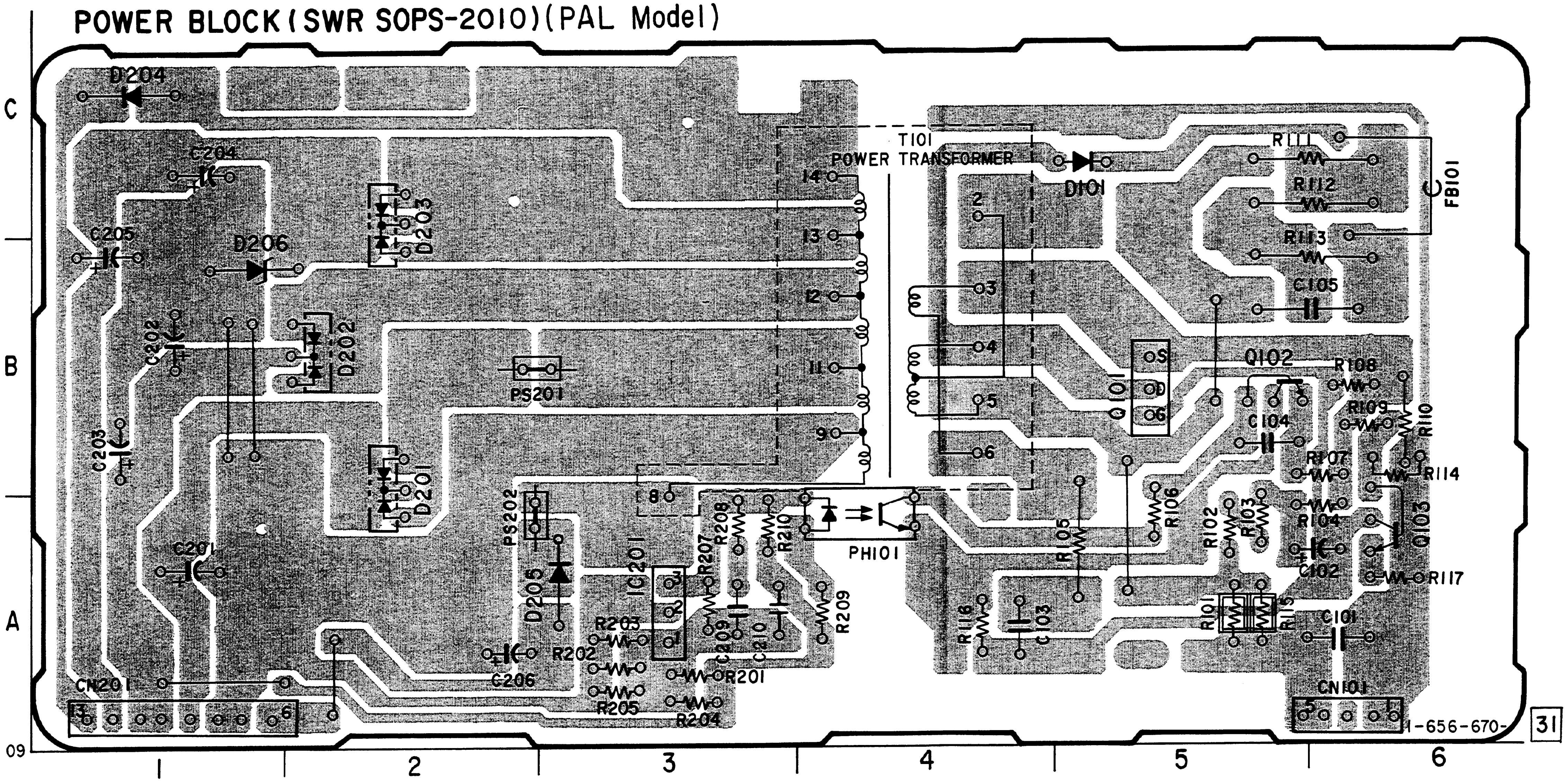
– Ref No. POWER BLOCK BOARD: 10,000 series –


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
POWER BLOCK
(SWR SOPS-2009)
CN101 5P
DC IN+ 5
DC IN+ 4
NC 3
DC IN- 2
DC IN- 1
R115 0.47
R101 0.47
R102 150k
R103 150k
R111 100k 2W
R112 100k 2W
R113 100k 2W
C105 0.01 630V
FB101
D101 1JH46-TPA3
T101 POWER TRANSFORMER
C101 0.01 630V
C102 10 50V
Q101 2SK2545
S
C103 0.01
R105 47 2W
R116 2.2
Q103 2SC3383-S
R109 22
R104 33k
R108 100k
Q102 2SC3383-S
C104 1000p
R106 100
R114 100
R117 2.2
R107 2.2
R110 0.22 1W
PH101 PC123
D204 21DQ10
D203 F10P06Q
D202 F10P04Q
D201 F10P04Q
PS201 ICP-N50 2A
PS202 ICP-N50 2A
D205 21DQ06
C205 270 25V
C204 1500 16V
D206 RD16F-T7B2
C202 1500 10V
C203 1500 10V
C201 2200 10V
C206 680 16V
CN201 8P
13 18V
12 14V
11 6V
10 6V
9 4V
8 GND
7 GND
6 -10V
R209 470
R210 100
R208 470
C209 0.33
R207 12k
IC201 HA17431PA-TZ
R201 390
R204 10k
R203 6.8k
R202 270
R205 5.6k
09

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiès par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numèro spécifiè.

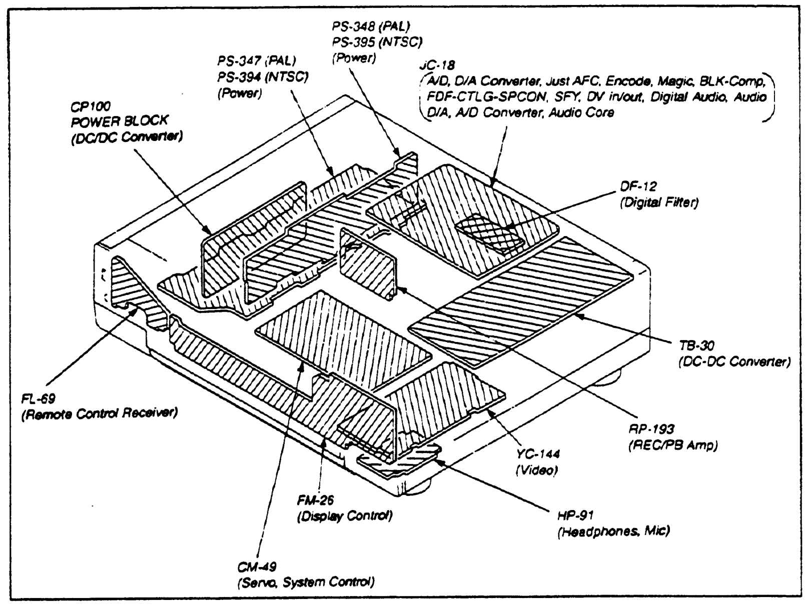
POWER BLOCK (DC-DC CONVERTER) (SWP SOPS-2010) (PAL Model) PRINTED WIRING BOARD

– Ref No. POWER BLOCK BOARD: 10,000 series –


POWER BLOCK(SWR SOPS-2010)(PAL Model)
C
B
A
09
1
2
3
4
5
6
D204
C204
C205
D206
D203
C202
D202
C203
D201
C201
PS201
PS202
D205
IC201
R203
R202
C206
R205
R204
R201
R207
R208
R210
C209
C210
R209
CN201
T101
POWER TRANSFORMER
14
13
12
11
9
8
2
3
4
5
6
PH101
D101
R111
R112
R113
C105
FB101
Q101
S
D
G
Q102
R108
R109
R110
C104
R107
R114
R104
Q103
C102
R117
R106
R105
R102
R103
R116
C103
R101
R115
C101
CN101
1-656-670-
31

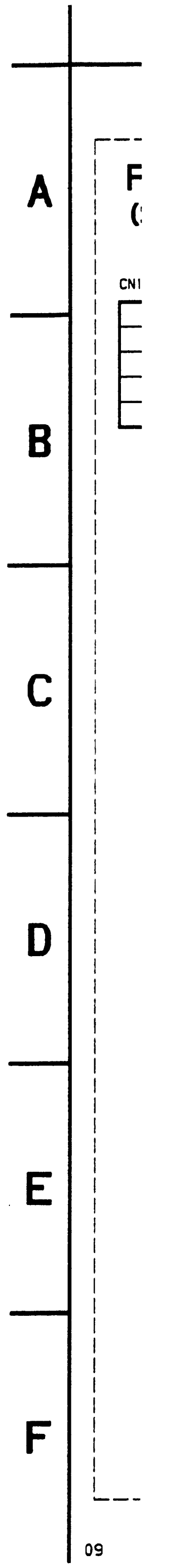
POWER BLOCK
(DSR-30P)

CN101	A-6
CN201	A-1
D101	C-5
D201	A-2
D202	B-2
D203	C-2
D205	A-3
D206	B-1
IC201	A-3
Q101	B-5
Q102	B-5
Q103	A-6


PS-348 (PAL)
PS-395 (NTSC)
(Power)
PS-347 (PAL)
PS-394 (NTSC)
(Power)
JC-18
(A/D, D/A Converter, Just AFC, Encode, Magic, BLK-Comp, FDF-CTLG-SPCON, SFY, DV in/out, Digital Audio, Audio D/A, A/D Converter, Audio Core)
CP100
POWER BLOCK
(DC/DC Converter)
DF-12
(Digital Filter)
TB-30
(DC-DC Converter)
FL-69
(Remote Control Receiver)
RP-193
(REC/PB Amp)
YC-144
(Video)
FM-26
(Display Control)
HP-91
(Headphones, Mic)
CM-49
(Servo, System Control)

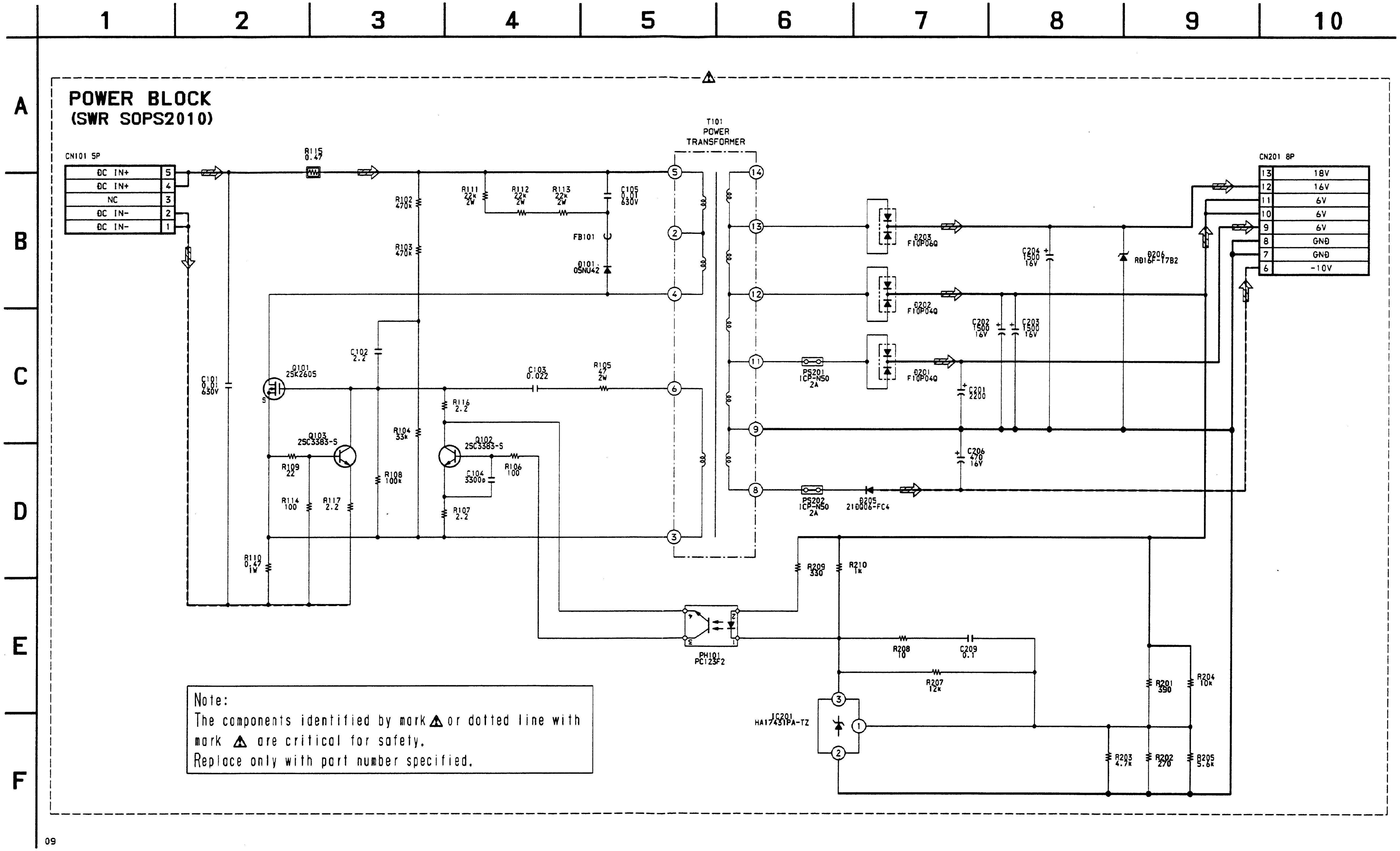
POWER B

– Ref No. PO


A
F
CN1
B
C
D
E
F
09

POWER BLOCK (DC-DC CONVERTER) (SWP SOPS-2010) (PAL Model) SCHEMATIC DIAGRAM

– Ref No. POWER BLOCK BOARD: 10,000 series –


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
POWER BLOCK
(SWR SOPS2010)
CN101 5P
ÐC IN+ 5
ÐC IN+ 4
NC 3
ÐC IN- 2
ÐC IN- 1
R115 0.47
R102 470k
R103 470k
R111 22k 2W
R112 22k 2W
R113 22k 2W
C105 0.01 630V
FB101
D101 05NU42
C102 2.2
C101 0.01 630V
Q101 2SK2605
S
C103 0.022
R105 47 2W
R116 2.2
Q103 2SC3383-S
R109 22
R104 33k
Q102 2SC3383-S
R106 100
C104 3300p
R108 100k
R114 100
R117 2.2
R107 2.2
R110 0.47 1W
T101 POWER TRANSFORMER
5
2
4
6
3
14
13
12
11
9
8
D203 F10P06Q
D202 F10P04Q
D201 F10P04Q
PS201 ICP-N50 2A
PS202 ICP-N50 2A
D205 21DQ06-FC4
C204 1500 16V
C202 1500 16V
C203 1500 16V
C201 2200
C206 470 16V
D206 RD16F-T7B2
CN201 8P
13 18V
12 16V
11 6V
10 6V
9 6V
8 GND
7 GND
6 -10V
R209 330
R210 1k
PH101 PC123F2
R208 10
C209 0.1
R207 12k
IC201 HA17431PA-TZ
R201 390
R204 10k
R203 4.7k
R202 270
R205 5.6k
09

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

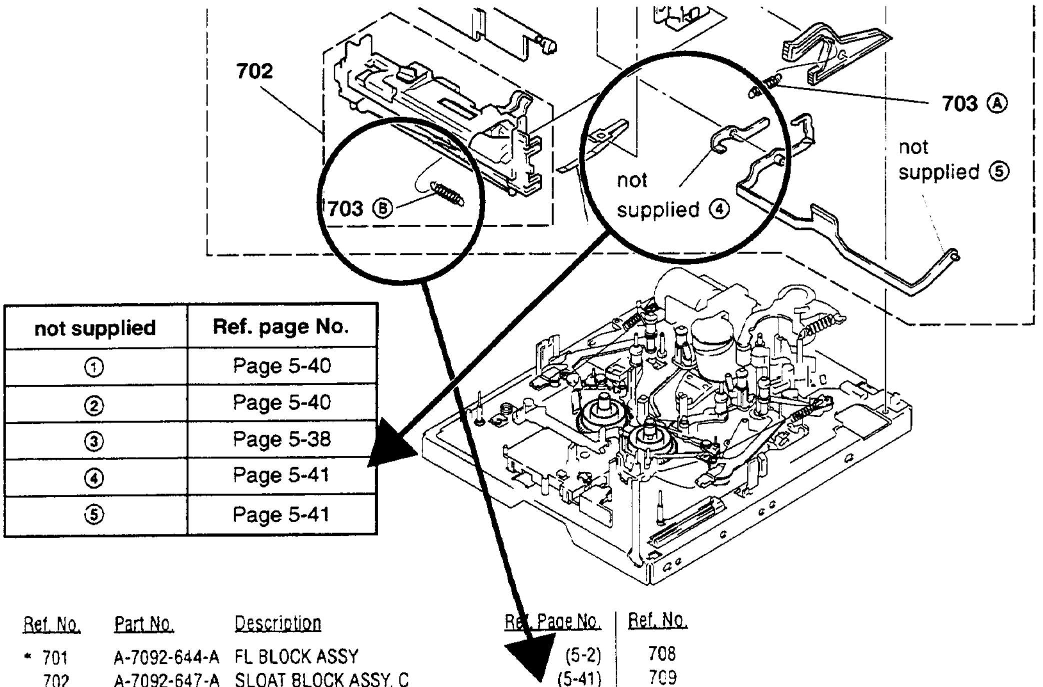
SECTION 5
ADJUSTMENTS

5-1. MECHANICAL SECTION ADJUSTMENTS

5-1-1. INFORMATION

1. HOW TO SEARCH REFERENCE PAGES FOR REMOVAL

- To facilitate finding the required pages on how to removing and attaching parts, reference pages are listed in the remarks of the exploded views (6-7 to 6-12 pages) in the 5-1. Mechanical Section Adjustment.



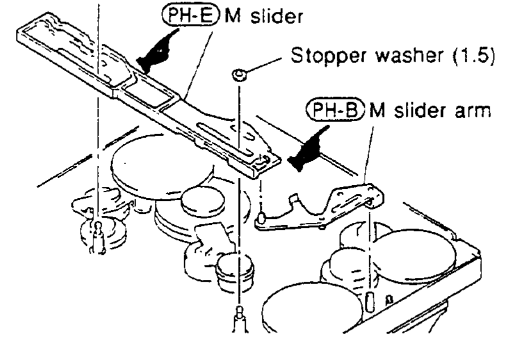
not supplied	Ref. page No.
①	Page 5-40
②	Page 5-40
③	Page 5-38
④	Page 5-41
⑤	Page 5-41

Ref. No.	Part No.	Description	Ref. Page No.	Ref. No.
* 701	A-7092-644-A	FL BLOCK ASSY	(5-2)	708
702	A-7092-647-A	SLOAT BLOCK ASSY, C	(5-41)	709
703	3-967-604-01	SPRING (DB), TENSION	(Ⓐ:5-40/Ⓑ:5-41)	710
704	3-967-655-01	DOOR, C	(5-40)	
705	3-967-613-01	SPRING (HS), TENSION COIL	(5-41)	711
				712

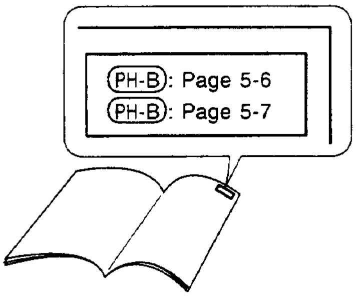
2. PHASE ADJUSTMENT MARK "(PH-)"

Numerous phase adjustments must be performed for removing and attaching parts (replacing parts) of the E mechanism. When removing and attaching parts, be sure to check the phase adjustment of corresponding parts. Parts that need phase adjustment are indicated with (PH-) mark. When replacing parts indicated with (PH-) mark, check their positions and phases so that the parts are attached smoothly in later.

Example



Example



The reference pages of phase adjustment are appeared on the top of the right in each page.

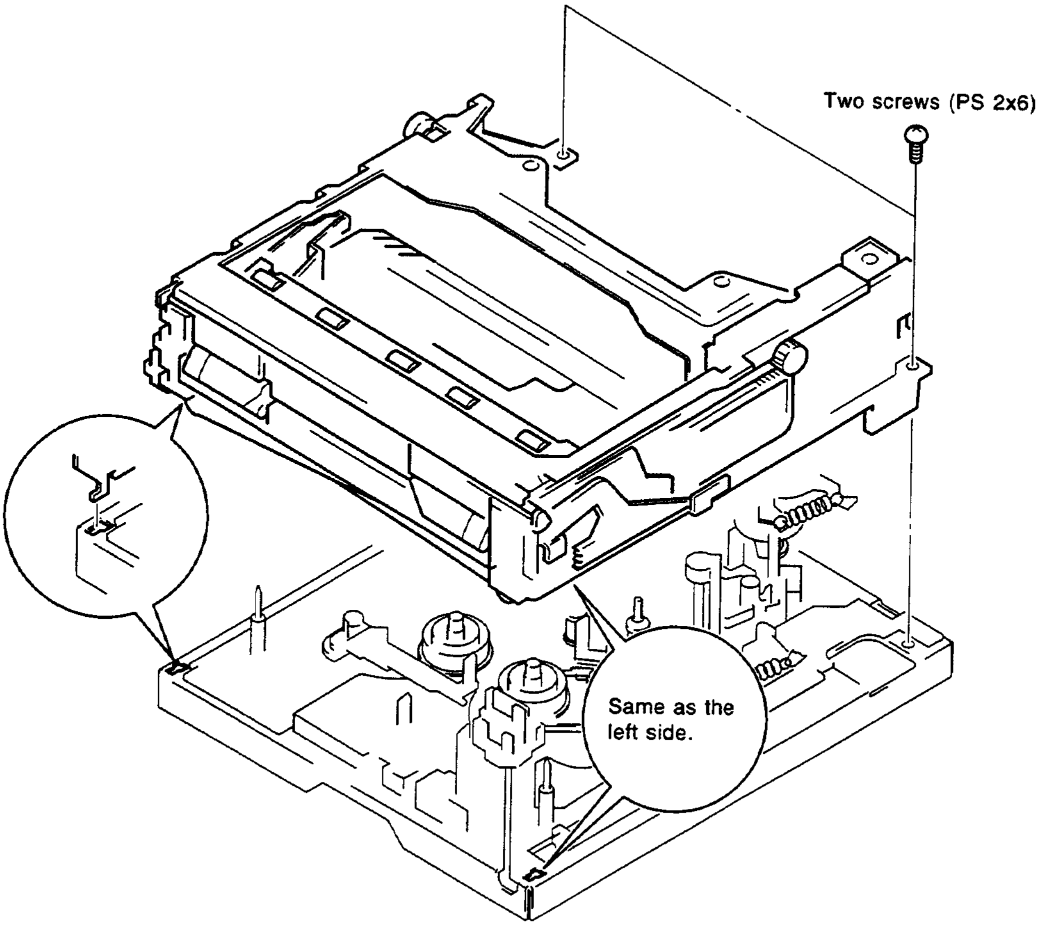
In case of the above figure, refer to Ⓑ and Ⓔ of "5-1-3. PHASE ADJUSTMENTS"

5-1-2. PREPARATION FOR MECHANICAL CHECK, ADJUSTMENT AND MAINTENANCE

2-1. FL BLOCK ASSEMBLY

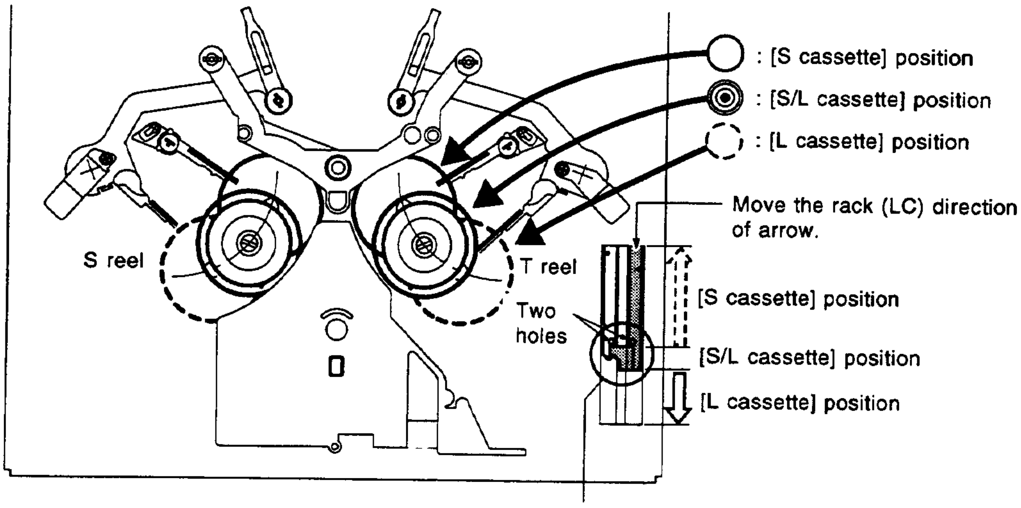
• Removing/Attaching

- For removal of mechanism deck, refer to 2-6. Removal of MD BLOCK ASSEMBLY.


Two screws (PS 2x6)
Same as the left side.

Fixing torque: 0.2942N•m (3.0 kg•cm)

2-2. CASSETTE POSITIONS


○ : [S cassette] position
◎ : [S/L cassette] position
◌ : [L cassette] position
Move the rack (LC) direction of arrow.
S reel
T reel
Two holes
[S cassette] position
[S/L cassette] position
[L cassette] position

Place the [S/L cassette] so that it can be seen from the right and left holes.

2-3. LOADING/UNLOADING

[Using the DC power supply] : With a loading motor

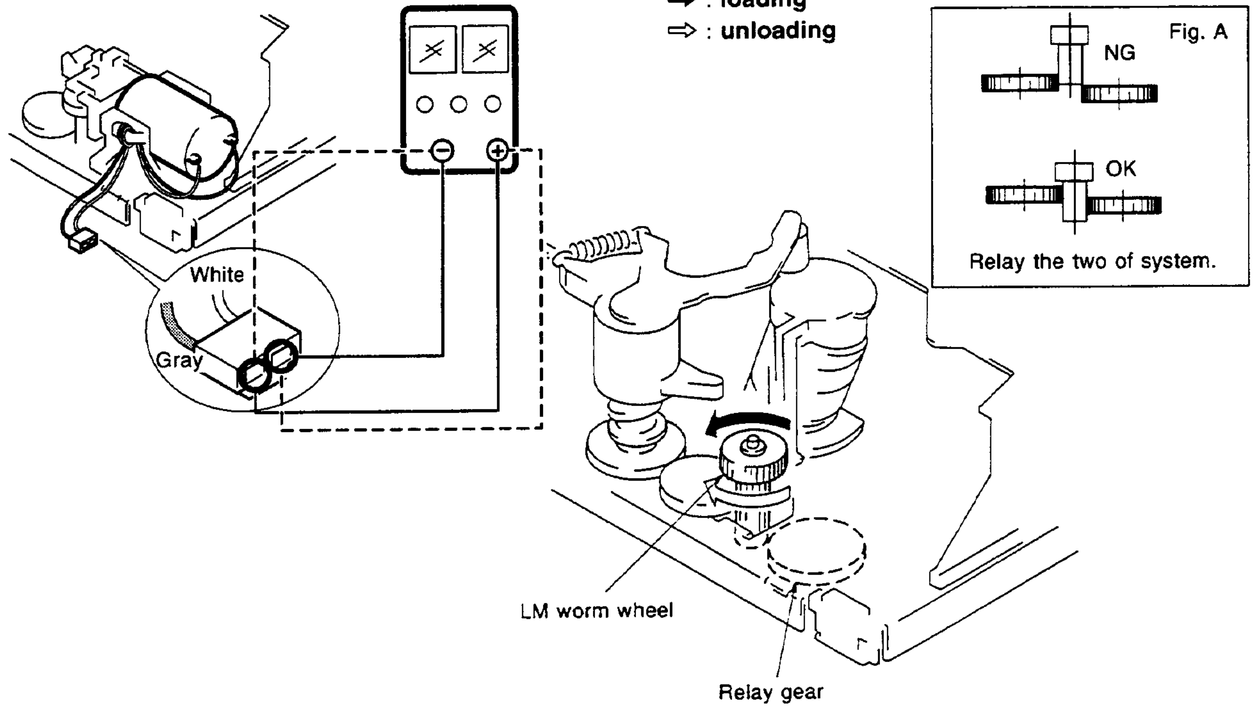
Note: Be sure to disconnect the connector of the loading motor before servicing.

—— : **loading**
- - - - : **unloading**

[Manual] : Without a loading motor

Note: If the LM worm wheel is rotated in the state shown in figure A (not engaged with the relay gear), the phases of the pinch drive system and the loading drive system will shift. (Refer to phase adjustment ⓖ on page 5-7 for details of phase adjustment.)

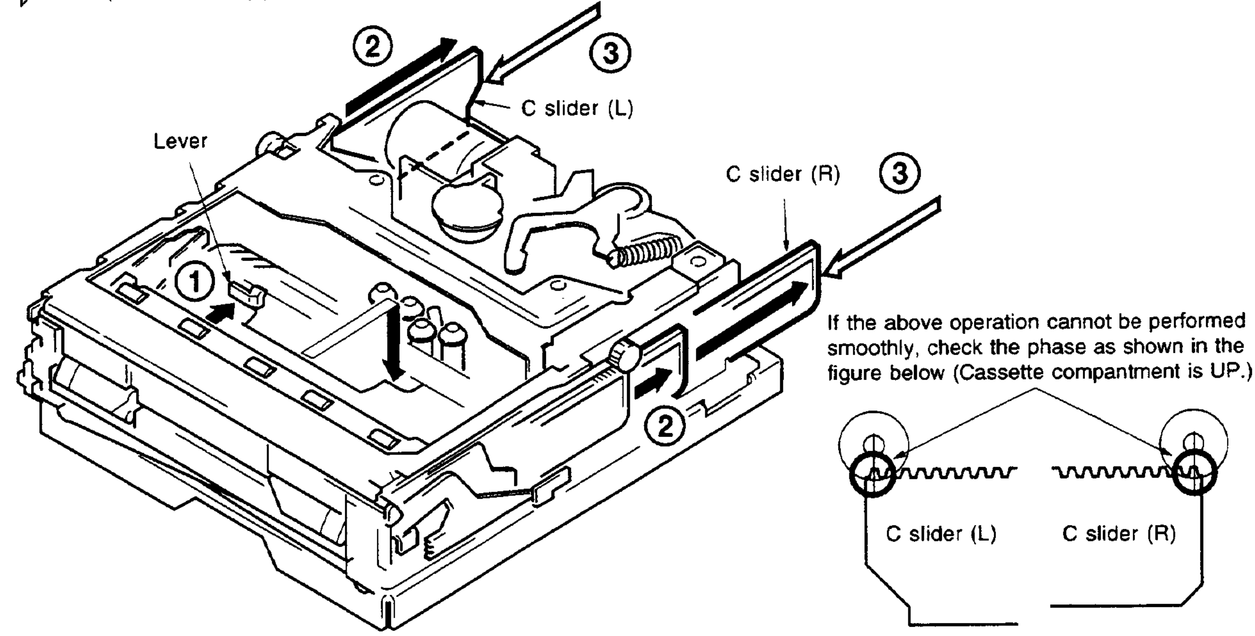
➡ : **loading**
⇨ : **unloading**


[DC power supply]
(9V)
White
Gray
Fig. A
NG
OK
Relay the two of system.
LM worm wheel
Relay gear

2-4. MANUAL UP/DOWN THE FL BLOCK

➡ DOWN. (While pushing the lever in the arrow ① direction, push C slider (L) and (R) simultaneously in the arrow ③ direction.)

⇨ UP. (Push C slider (L) and (R) simultaneously in the arrow ③ direction.)


②
③
C slider (L)
Lever
C slider (R)
③
①
②
C slider (L)
C slider (R)

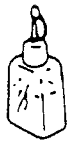
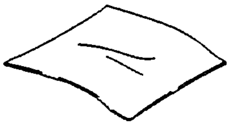
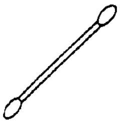
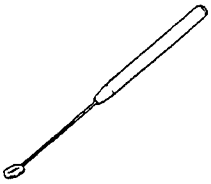
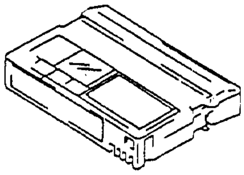
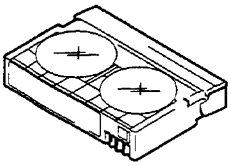
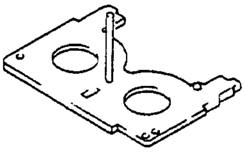
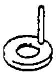
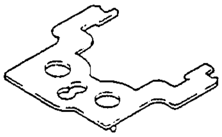
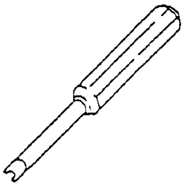
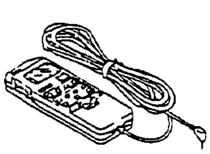
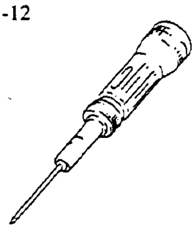
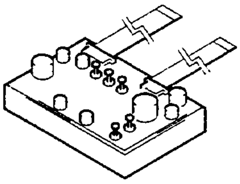
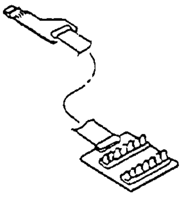
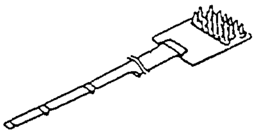
If the above operation cannot be performed smoothly, check the phase as shown in the figure below (Cassette compantment is UP.)

2-5. SERVICE JIGS LIST

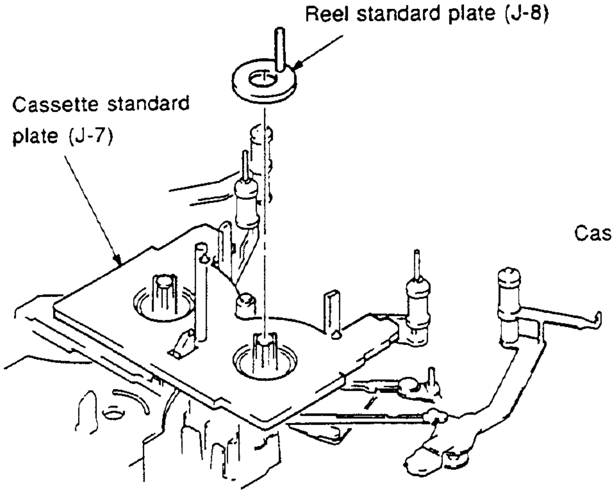
Ref. No.	Name	Part No.	Fixtur No.	Usage, Others Application, etc
J-1	Cleaning fluid	Y-2031-001-0		For cleaning drum assembly and tape guide
J-2	Wiping cloth	7-741-900-53		For cleaning drum assembly
J-3	Super fine applicator (Made by NIPPON APPLICATOR (P752D))			For cleaning tape guide
J-4	Mirror (Small oval type)	J-6080-840-A	GD-2038	Tape path
J-5	Tracking tape (XH2-1) (NTSC/PAL)	8-967-997-01		Tape path
J-6	Mini DV torque cassette	J-6082-360-A		For adjusting FWD/RVS back tension
J-7	Cassette standard plate (D/E mechanism)	J-6082-330-A		For adjusting tape guide and reel table
J-8	Reel standard plate (D/E mechanism)	J-6082-331-A		For adjusting reel table
J-9	TG2/7 preset plate	J-6082-358-A		For adjusting tape guide
J-10	Screwdriver for tape path	J-6082-026-A		For adjusting tape guide
J-11	Adjusting remote commander (RM-95 remodeled partly) Note1	J-6082-053-B		Tape path
J-12	Torque driver	J-9049-330-A		Mechanism check and replacement
J-13	Tension regulator adjustment board	J-6082-359-A		Electric tension regulator adjustment
J-14	CPC jig-2	J-6082-140-A		Tape path
J-15	Multi CPC jig	J-6082-311-A		Tape path

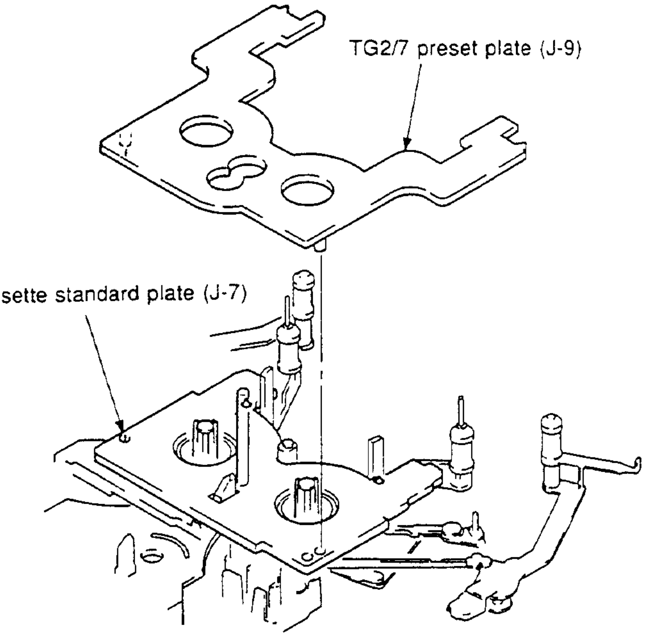
Other equipment used
- Oscilloscope
- DC power supply
- Digital voltage meter

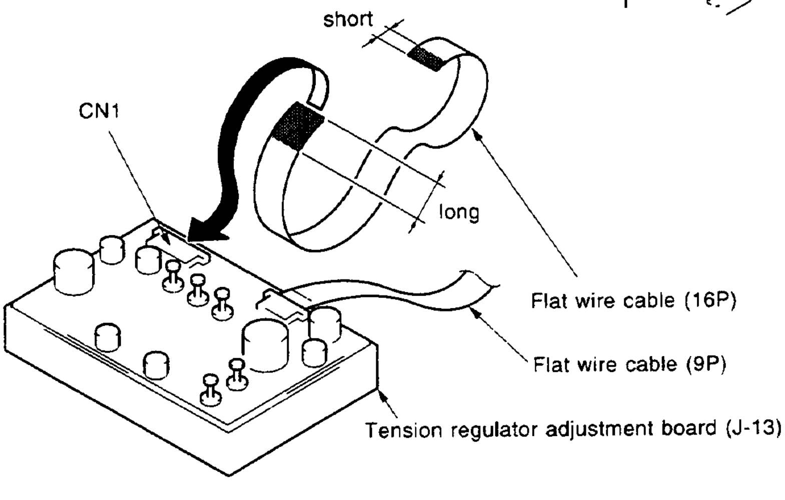
Note 1: If the micro processor IC in the adjusting remote commander is not the new micro processor (UPD7503G-C56-12), the pages cannot be switched. In this case, replase with the new micro processor (8-759-148-35).

J-1 	J-2 	J-3 	J-4 	J-5 
J-6 	J-7 	J-8 	J-9 	J-10 
J-11 	J-12 	J-13 	J-14 	J-15 

- **Attach the jigs**


Reel standard plate (J-8)
Cassette standard plate (J-7)


TG2/7 preset plate (J-9)
Cassette standard plate (J-7)

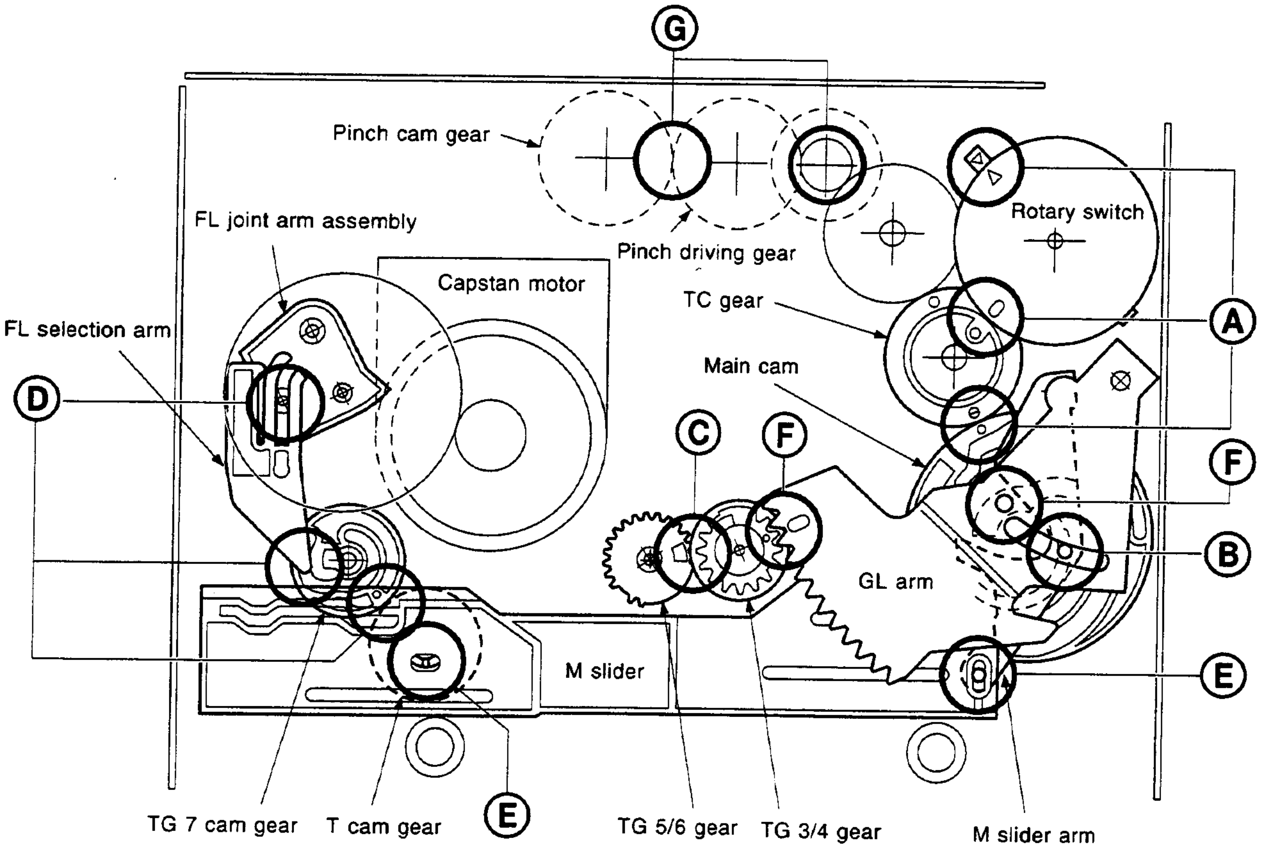

short
CN1
long
Flat wire cable (16P)
Flat wire cable (9P)
Tension regulator adjustment board (J-13)

5-1-3. PHASE ADJUSTMENTS

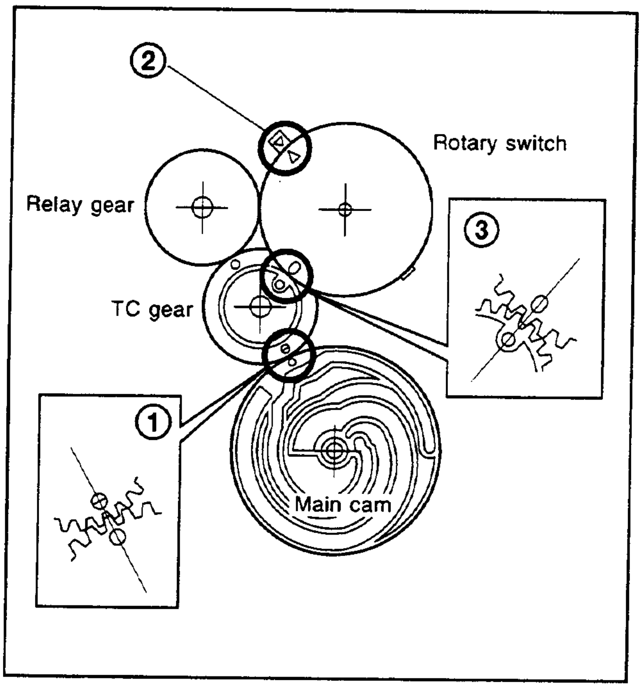
- This section classifies the phase adjustment into three blocks for clarity. The attaching order of each part is not described here. For details of the attaching order, refer to **"5-1-5. MECHANISM SECTION CHECKS AND REPLACEMENTS"**.

3-1. PHASE ADJUSTMENT (Loading/Unloading Driving Section)

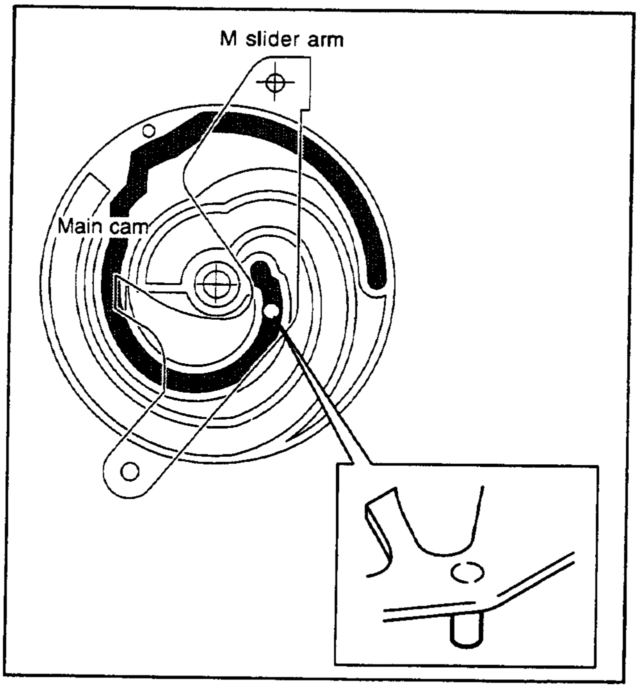
Note 1 : Adjust it at the **UNLOADING** position unless otherwise specified.
Note 2 : Ⓐ to Ⓖ shown below are the orders for the phase adjustment.


Ⓖ
Pinch cam gear
FL joint arm assembly
Pinch driving gear
Capstan motor
TC gear
Rotary switch
FL selection arm
Ⓓ
Main cam
Ⓐ
Ⓒ
Ⓕ
Ⓕ
Ⓑ
GL arm
M slider
Ⓔ
TG 7 cam gear
T cam gear
Ⓔ
TG 5/6 gear
TG 3/4 gear
M slider arm

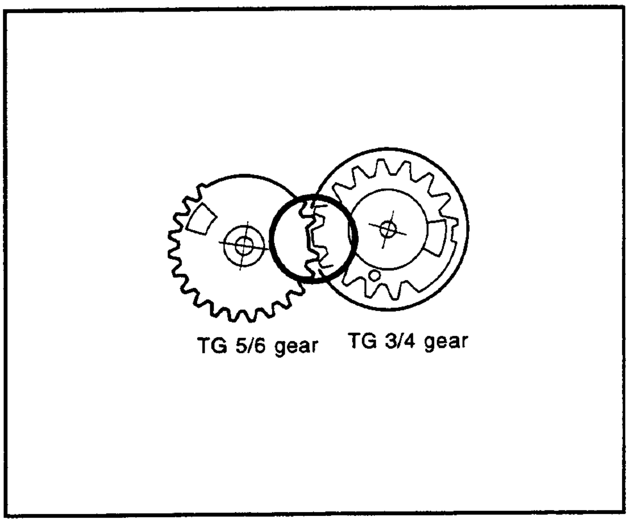
PHASE ADJUSTMENT Ⓐ


②
Rotary switch
Relay gear
③
TC gear
①
Main cam

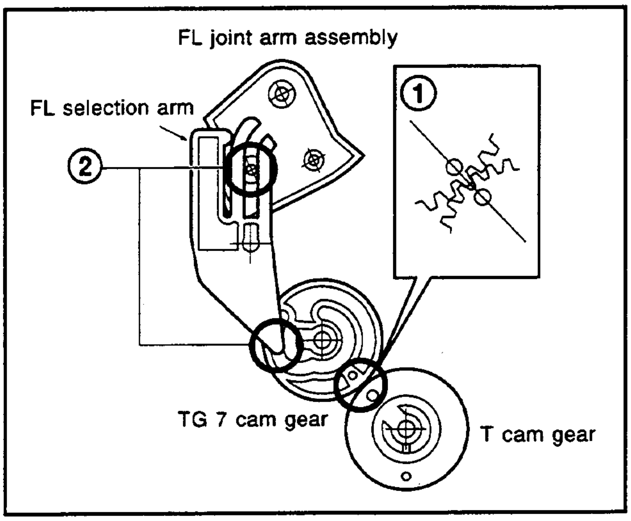
PHASE ADJUSTMENT Ⓑ


M slider arm
Main cam

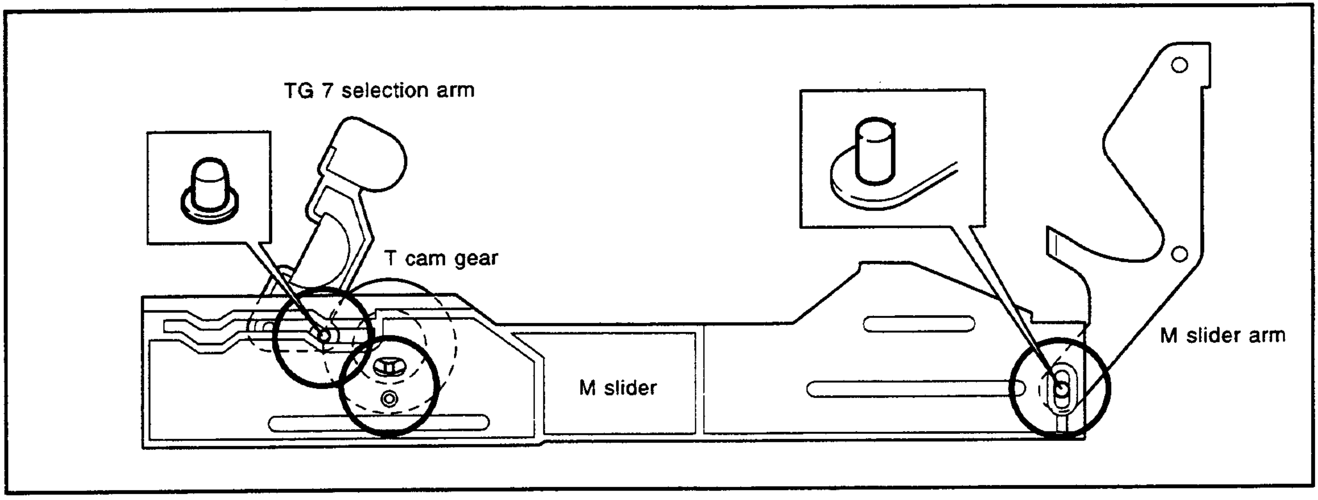
PHASE ADJUSTMENT Ⓒ


TG 5/6 gear
TG 3/4 gear

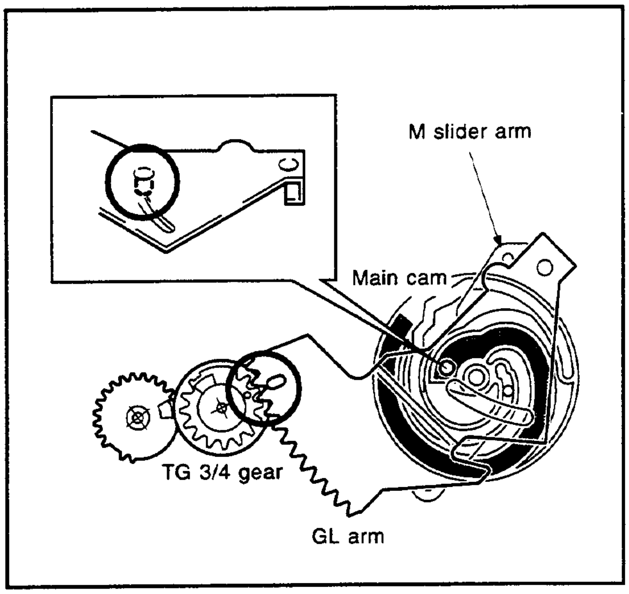
PHASE ADJUSTMENT Ⓓ


FL joint arm assembly
FL selection arm
②
①
TG 7 cam gear
T cam gear

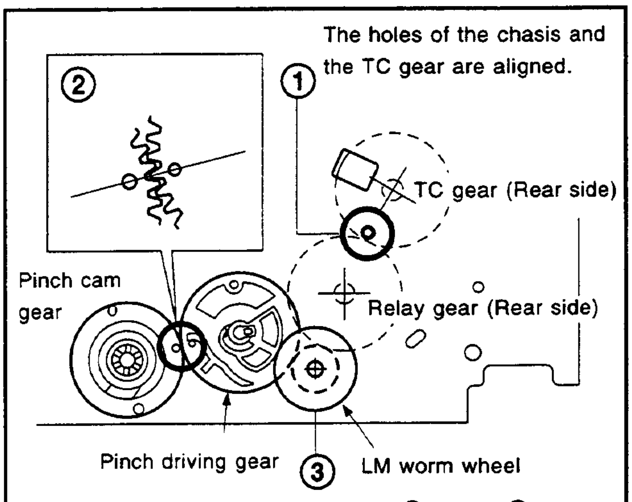
PHASE ADJUSTMENT Ⓔ


TG 7 selection arm
T cam gear
M slider
M slider arm

PHASE ADJUSTMENT Ⓕ


M slider arm
Main cam
TG 3/4 gear
GL arm

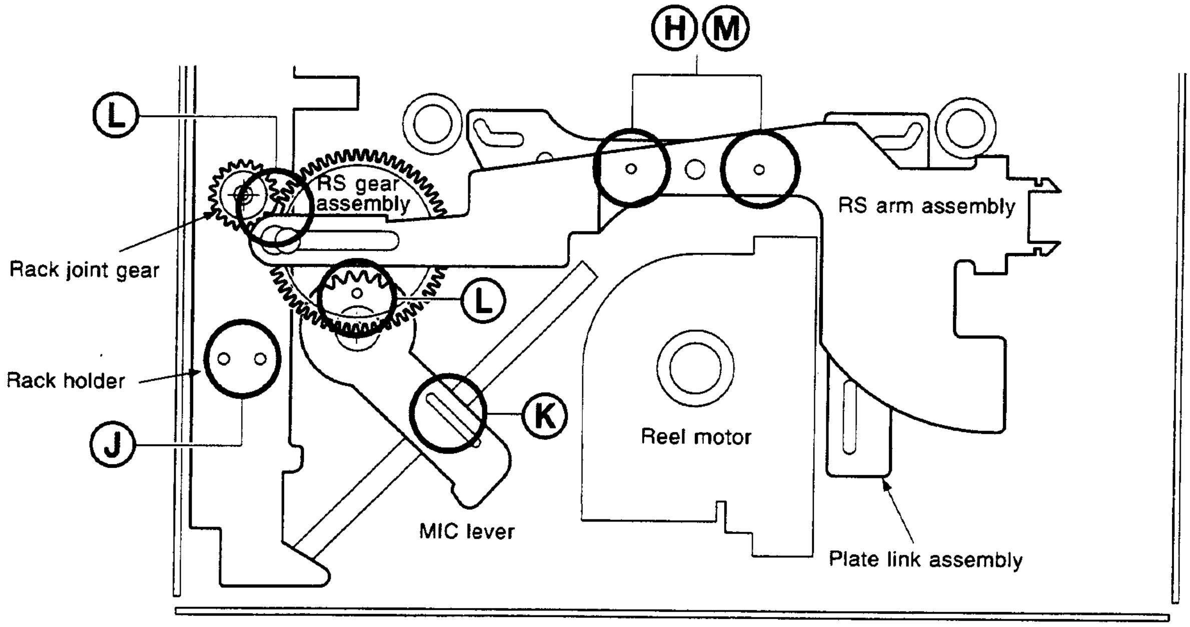
PHASE ADJUSTMENT Ⓖ


The holes of the chasis and the TC gear are aligned.
①
②
TC gear (Rear side)
Pinch cam gear
Relay gear (Rear side)
Pinch driving gear
③
LM worm wheel

1. After performing phase adjustment Ⓐ, check ①.
2. Phase adjustments ① and ② should be relayed with ③ LM worm wheel.

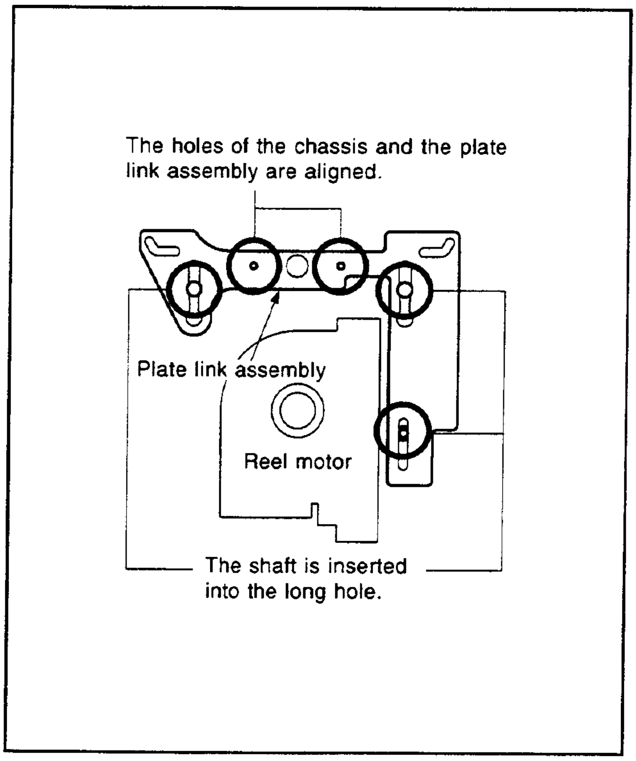
3-2. PHASE ADJUSTMENT (S/L Cassette Selection Section)

Note 1 : Adjust if at the **S/L cassette** position unless otherwise specified.
Note 2 : Ⓗ to Ⓜ shown below are the orders for the phase adjustment.



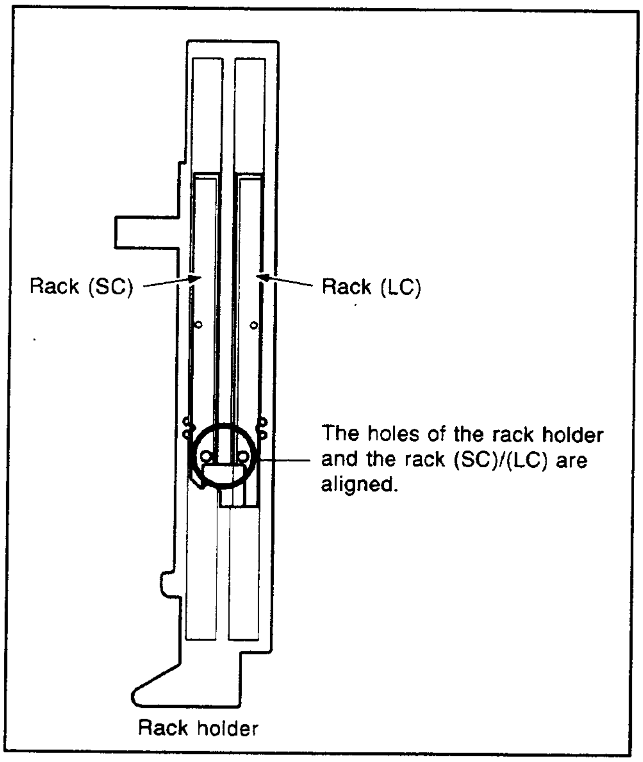
ⒽⓂ
Ⓛ
RS gear assembly
RS arm assembly
Rack joint gear
Ⓛ
Rack holder
Ⓚ
Reel motor
Ⓙ
MIC lever
Plate link assembly

PHASE ADJUSTMENT Ⓗ



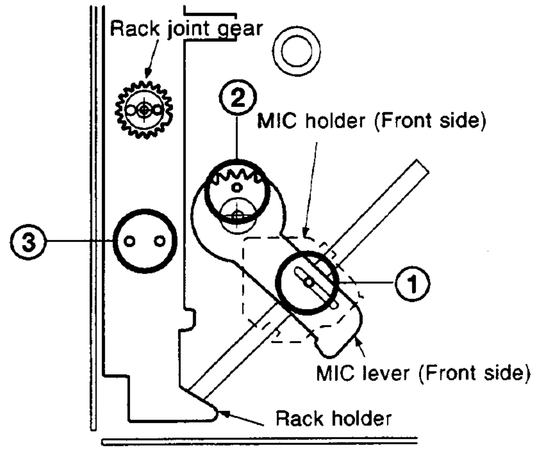
The holes of the chassis and the plate link assembly are aligned.
Plate link assembly
Reel motor
The shaft is inserted into the long hole.

PHASE ADJUSTMENT Ⓙ



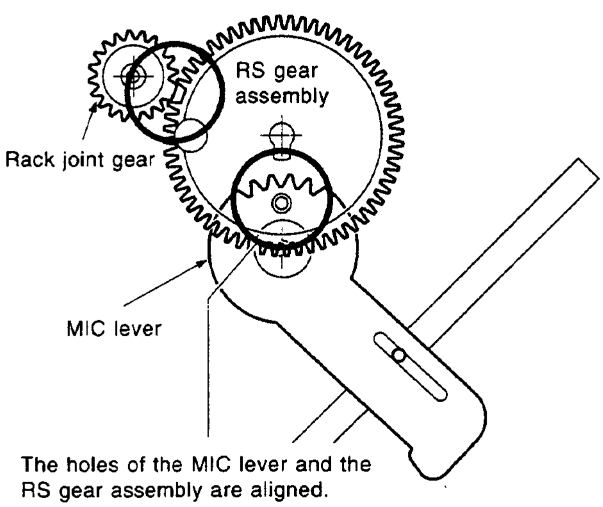
Rack (SC)
Rack (LC)
The holes of the rack holder and the rack (SC)/(LC) are aligned.
Rack holder

PHASE ADJUSTMENT Ⓚ


Rack joint gear
②
MIC holder (Front side)
③
①
MIC lever (Front side)
Rack holder

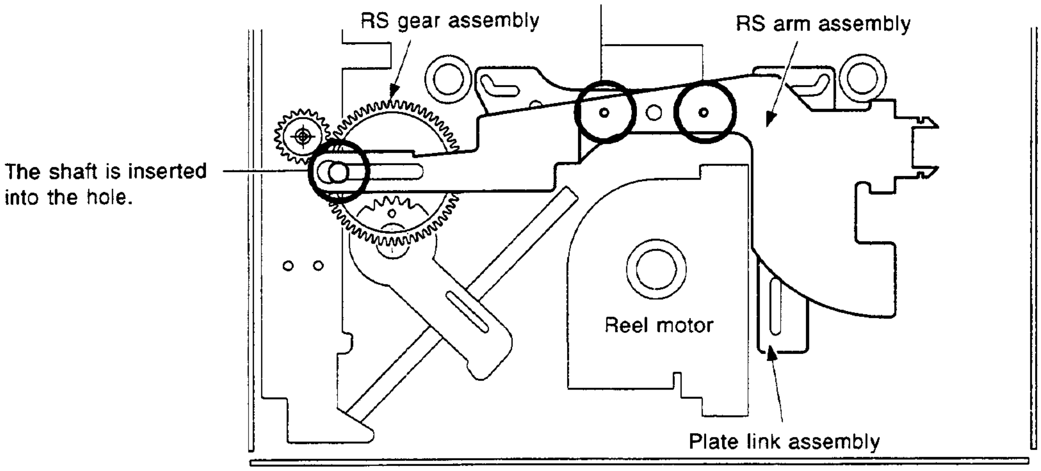
Note : ② should be aligned with the hole of the chassis.
: ③ should be aligned with the hole of the rack (SC)/ (LC).

PHASE ADJUSTMENT Ⓛ


RS gear assembly
Rack joint gear
MIC lever

The holes of the MIC lever and the RS gear assembly are aligned.

PHASE ADJUSTMENT Ⓜ


RS gear assembly
RS arm assembly
Reel motor
Plate link assembly

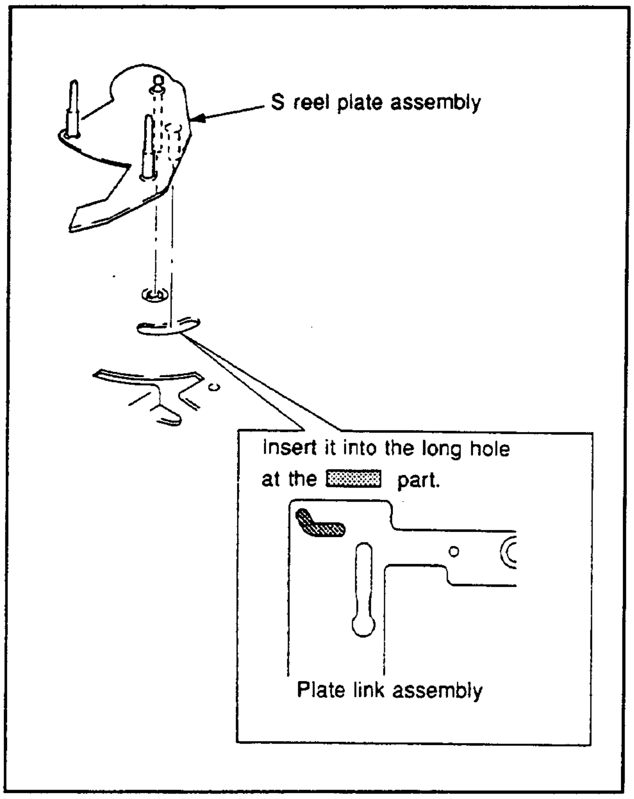
The holes of the plate link assembly and the RS arm assembly are aligned.

The shaft is inserted into the hole.

3-3. PHASE ADJUSTMENT (Mechanism Chassis Upper Surface Parts)

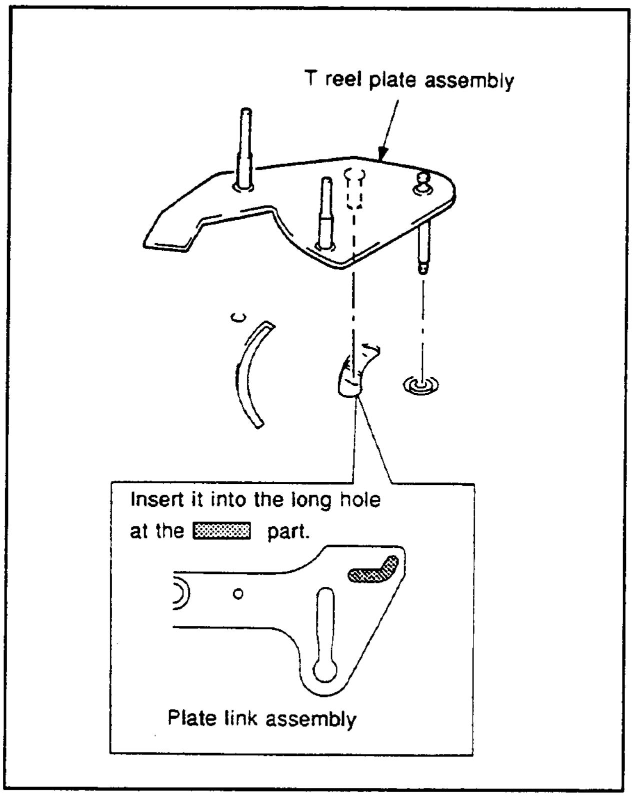
Note : Adjust if at the (UNLOADING) position unless otherwise specified.

PHASE ADJUSTMENT Ⓝ


S reel plate assembly
Plate link assembly

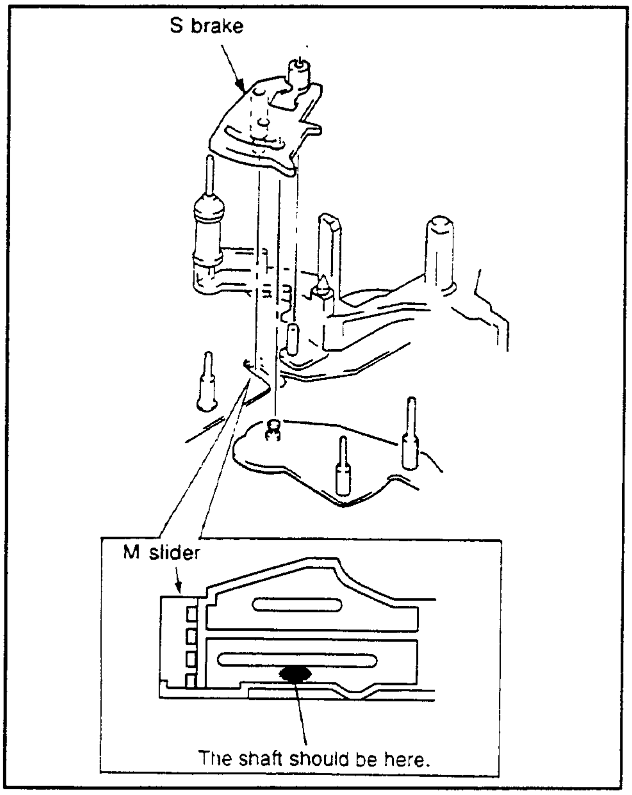
Insert it into the long hole at the ▨ part.

PHASE ADJUSTMENT Ⓟ


T reel plate assembly
Plate link assembly

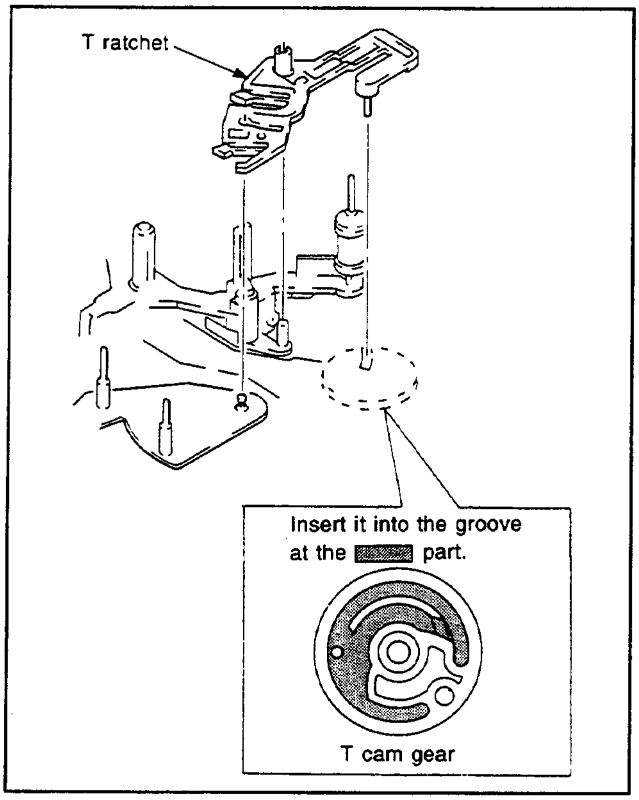
Insert it into the long hole at the ▨ part.

PHASE ADJUSTMENT Ⓠ


S brake
M slider

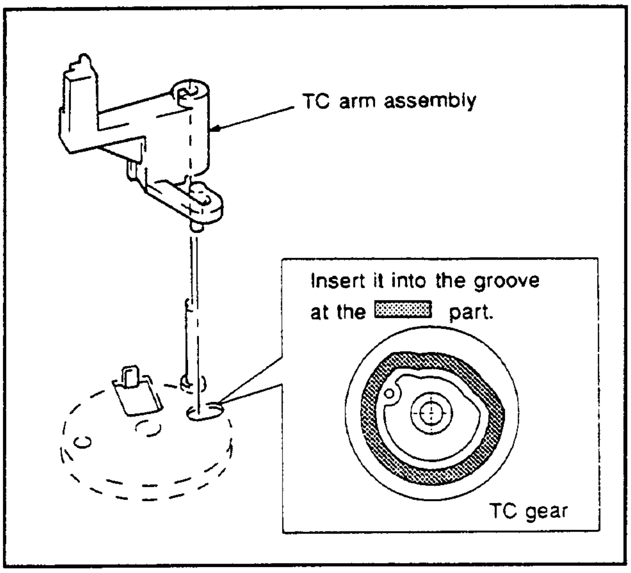
The shaft should be here.

PHASE ADJUSTMENT Ⓡ

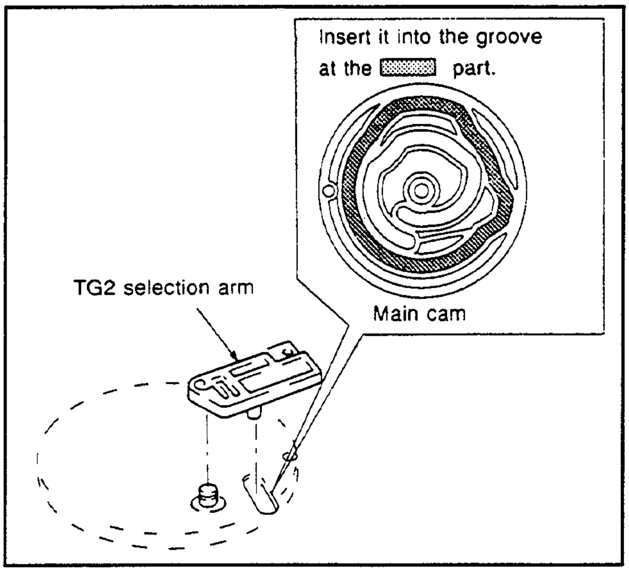

T ratchet
T cam gear

Insert it into the groove at the ▨ part.

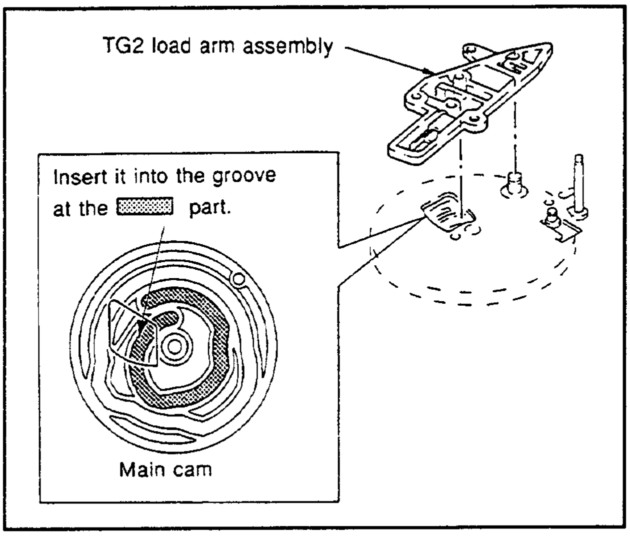
PHASE ADJUSTMENT Ⓢ


TC arm assembly
Insert it into the groove
at the ▨ part.
TC gear

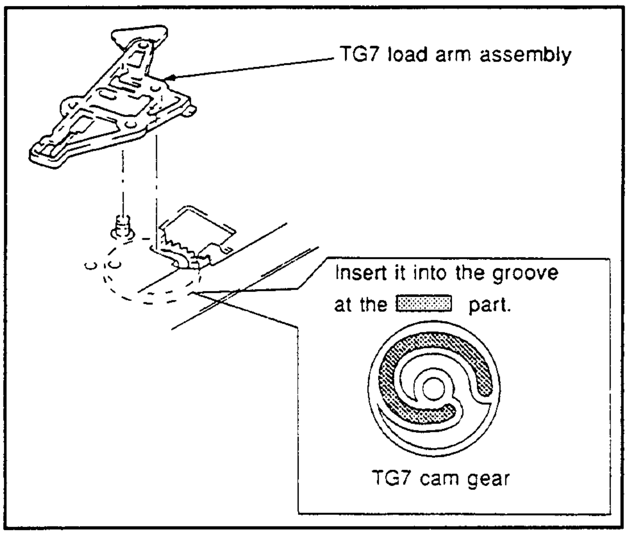
PHASE ADJUSTMENT Ⓣ


Insert it into the groove
at the ▨ part.
TG2 selection arm
Main cam

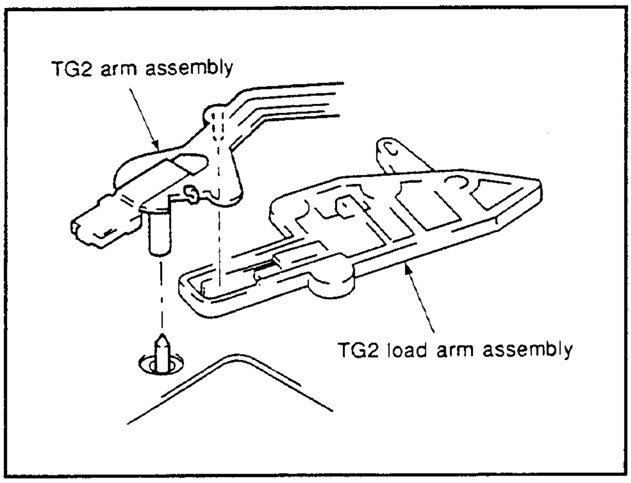
PHASE ADJUSTMENT Ⓤ


TG2 load arm assembly
Insert it into the groove
at the ▨ part.
Main cam

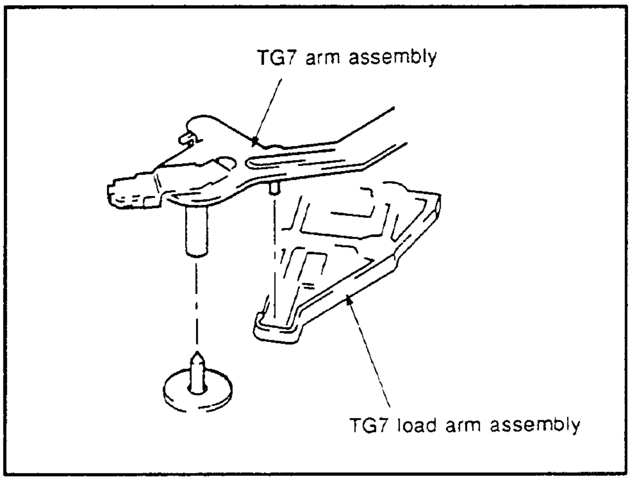
PHASE ADJUSTMENT Ⓥ


TG7 load arm assembly
Insert it into the groove
at the ▨ part.
TG7 cam gear

PHASE ADJUSTMENT Ⓦ


TG2 arm assembly
TG2 load arm assembly

PHASE ADJUSTMENT Ⓧ


TG7 arm assembly
TG7 load arm assembly

5-1-4. PERIODIC CHECK AND MAINTENANCE

- Carry out the following maintenance and periodic checks not only to fully display the functions and performance of the set, but also for the equipment and tape. After repairing, service the set as follows, regardless of the length of use.

4-1. CLEANING OF ROTARY DRUM ASSEMBLY

1) Press a wiping cloth (Ref No. J-2) moistened with cleaning fluid (Ref No. J-1) against the rotary drum assembly gently, and clean it while rotating the upper rotary drum assembly slowly with your finger in the counterclockwise direction.

Note: Do not rotate the motor on power or rotate the upper rotary drum assembly in the clockwise direction with your finger. The head tip will also be damaged if the wiping cloth is moved perpendicularly against it. Therefore, be sure to follow the above instructions when cleaning the rotary drum assembly.

4-2. CLEANING OF TAPE PATH SYSTEM (See Fig. 1.)

1) In the EJECT mode, clean the tape path systems (TG-1, 2, 3, 4, 5, 6, 7, 8, capstan) and the lower drum using a superfine applicator (Ref No. J-3) moistened with cleaning fluid.

Note 1: Make sure that no oil or grease of the link mechanisms sticks to the superfine applicator (Ref No. J-3.)

Note 2: Do not use a applicator moistened with alcohol to the other guide cleaning. But clean the pinch roller using alcohol.

Note : When cleaning the tape path system, be sure to set it to the **LOADING** position. (Refer to page 5-3.)

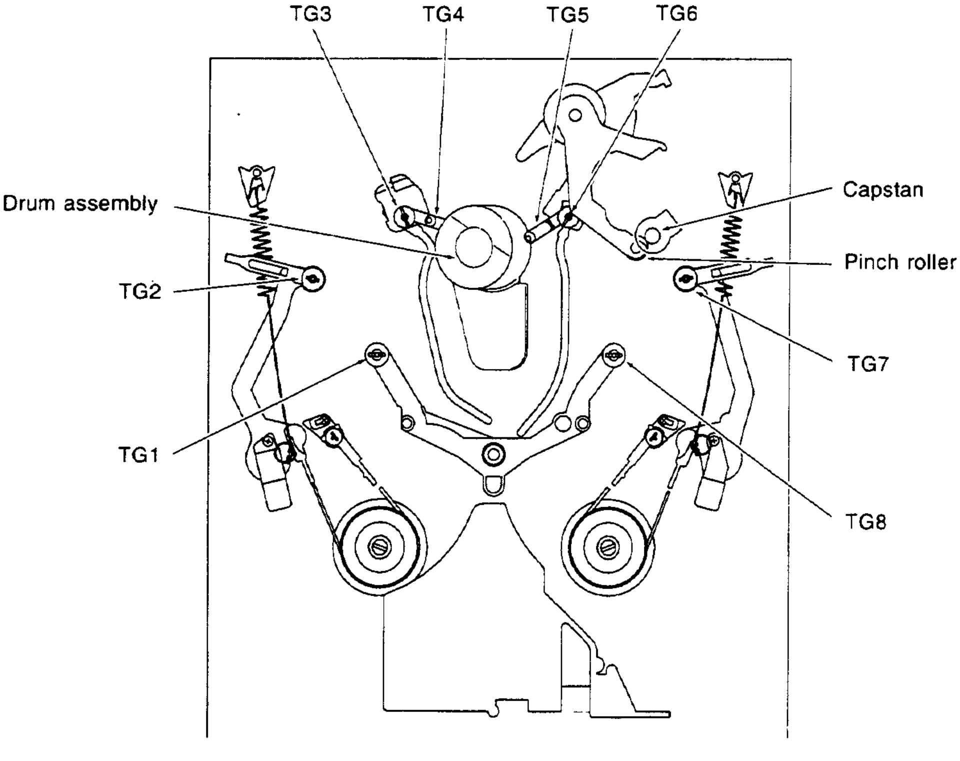


Fig. 1.

4-3. PERIODIC CHECKS

Location of Maintenance and Check		Hours of Use (H)										Remarks
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
	Cleaning of tape path surface	○	○	○	○	○	○	○	○	○	○	Take care not to adhere the oil.
	Cleaning and degaussing of rotary drum assembly	○	○	○	○	○	○	○	○	○	○	
Driving System	Capstan shaft (Bearing)	—	☆	—	☆	—	☆	—	☆	—	☆	Make sure that no oil gets on the tape path surface.
	Loading motor	—	☆	—	☆	—	☆	—	☆	—	☆	A-7026-007-A
Performance Confirmation	Abnormal noise	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Back tension measurement	—	☆	—	☆	—	☆	—	☆	—	☆	
	Brake system	—	☆	—	☆	—	☆	—	☆	—	☆	
	FWD RVS Torque measurement	—	☆	—	☆	—	☆	—	☆	—	☆	

○ : Cleaning ☆ : Confirmation

Note: When overhauling, refer to the checks above and replace parts.

Note: Grease

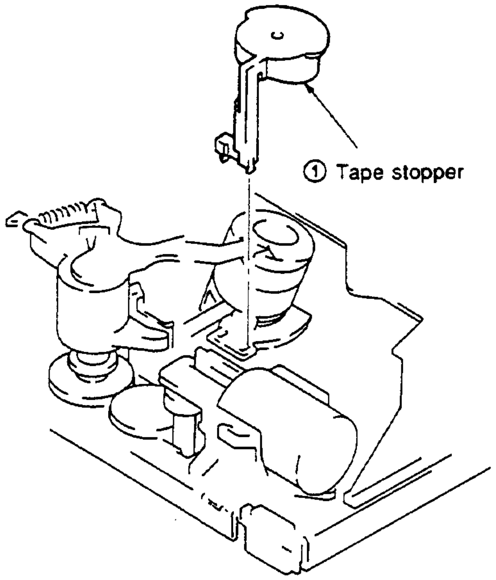
- Be sure to use the specified the grease (The SG-055G is used all in the E mechanism). Check the quantity of grease when installing the parts which is needed to apply the grease.
- FLOIL (SG-055G): Part No. 7-651-000-09

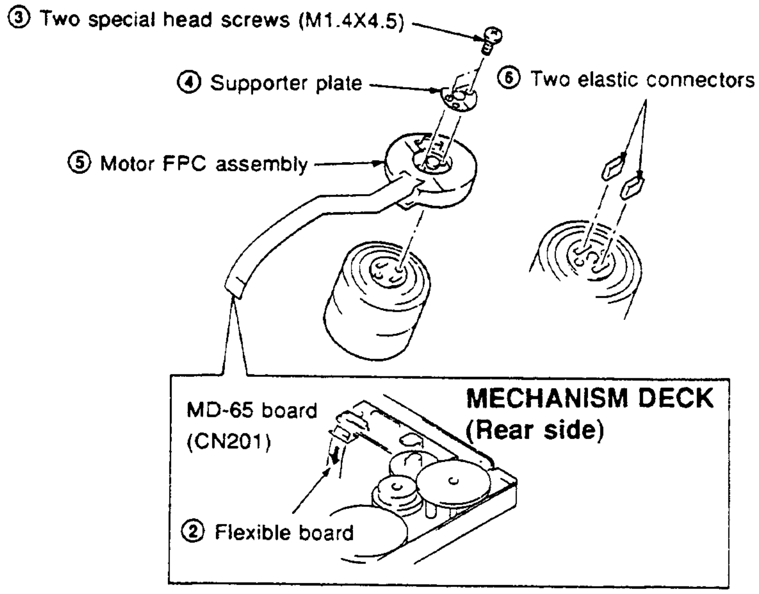
5-1-5. MECHANISM SECTION CHECKS AND REPLACEMENTS

5-1. TAPE STOPPER, MOTOR FPC ASSEMBLY AND ELASTIC CONNECTOR

- **Removing/Attaching**

- Removing : ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ① → Adjust them according to the flow chart (START-3) on page 5-43.


① Tape stopper

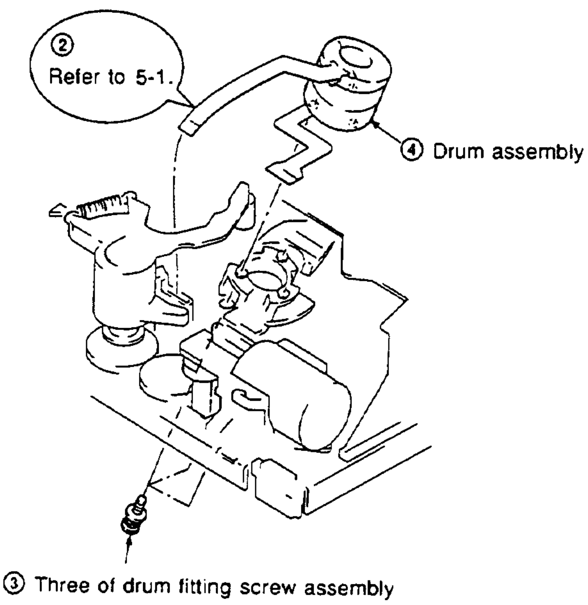

③ Two special head screws (M1.4X4.5)
④ Supporter plate
⑥ Two elastic connectors
⑤ Motor FPC assembly
MD-65 board
(CN201)
MECHANISM DECK
(Rear side)
② Flexible board

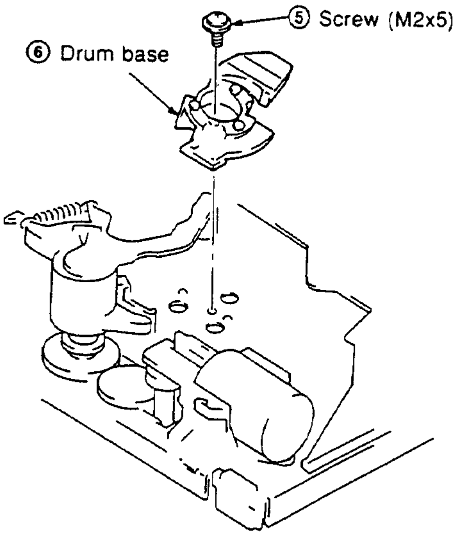
Fixing torque: 0.0490N•m (0.5 kg•cm)

5-2. DRUM ASSEMBLY AND DRUM BASE

- **Removing/Attaching**

- Removing : ① Tape stopper (Refer to 5-1.) → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ① → Adjust them according to the flow chart (START-3) on page 5-43.


②
Refer to 5-1.
④ Drum assembly
③ Three of drum fitting screw assembly

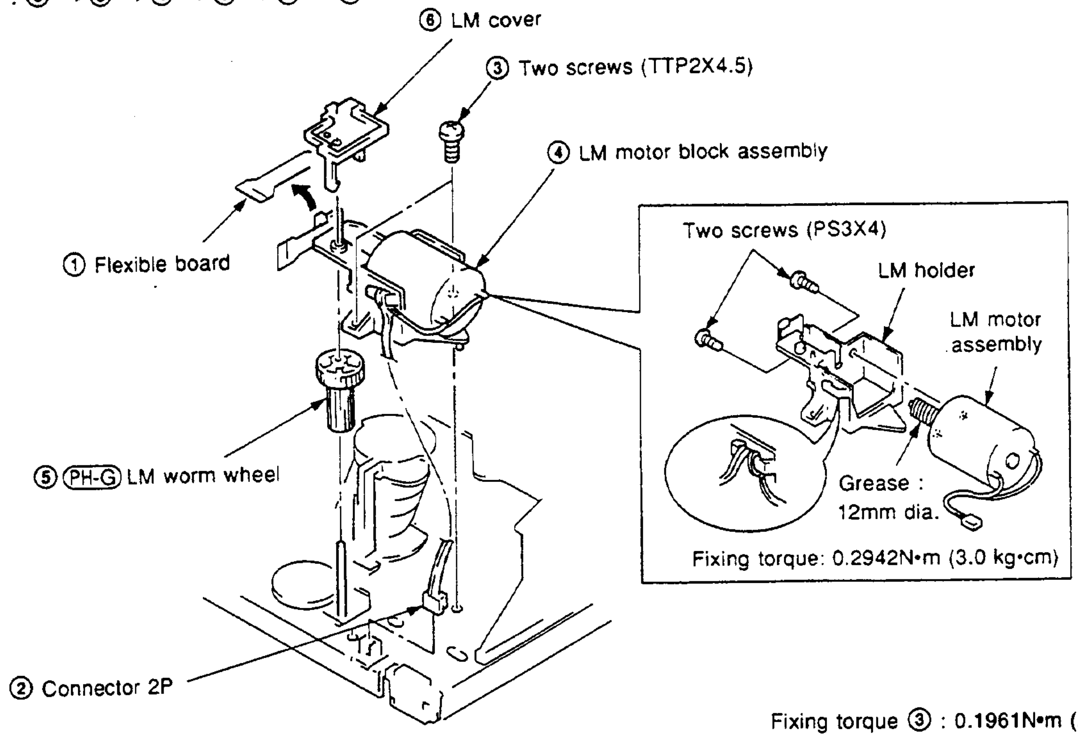

⑤ Screw (M2x5)
⑥ Drum base

Fixing torque ③ : 0.0294N•m (0.3 kg•cm)
⑤ : 0.0686N•m (0.7 kg•cm)

5-3. LM COVER, LM WORM WHEEL, LM HOLDER AND LM MOTOR ASSEMBLY

• Removing/Attaching

- Removing : ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ①

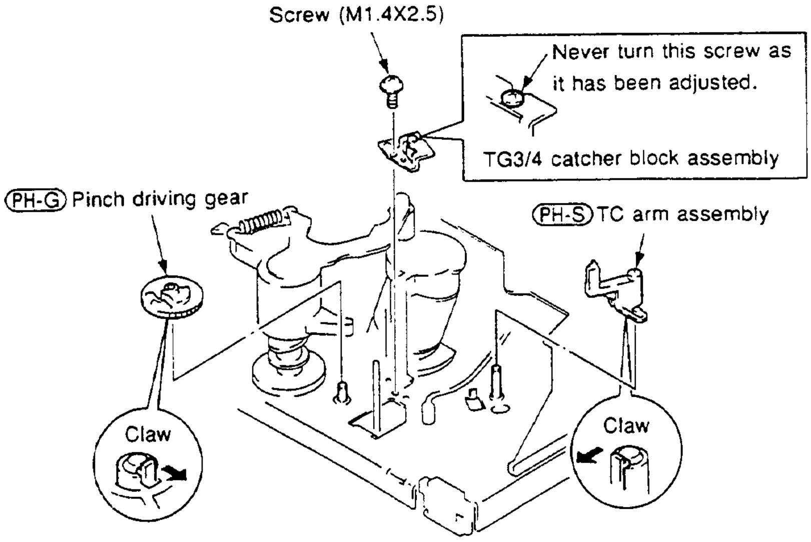

⑥ LM cover
③ Two screws (TTP2X4.5)
④ LM motor block assembly
① Flexible board
⑤ PH-G LM worm wheel
② Connector 2P
Two screws (PS3X4)
LM holder
LM motor assembly
Grease : 12mm dia.
Fixing torque: 0.2942N•m (3.0 kg•cm)

Fixing torque ③ : 0.1961N•m (2.0 kg•cm)

5-4. TG3/4 CATCHER BLOCK ASSEMBLY, PINCH DRIVING GEAR AND TC ARM ASSEMBLY

• Removing/Attaching

- Removing : After removing the LM motor assembly (Refer to 5-3.), remove each part.
- Attaching : After attaching each part and the LM motor block assembly, adjust them according to the flow chart (START-3) on page 5-43. (Only when the TG3/4 catcher block assembly is removed.)


Screw (M1.4X2.5)
Never turn this screw as it has been adjusted.
TG3/4 catcher block assembly
PH-G Pinch driving gear
PH-S TC arm assembly
Claw
Claw

Fixing torque : 0.0686N•m (0.7 kg•cm)

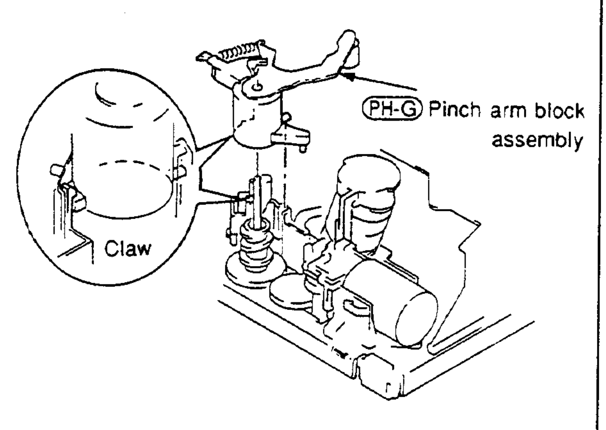
PH-G : Page 5-7

5-5. PINCH ARM ASSEMBLY, PINCH LIMITER AND TENSION COIL SPRING (PINCH)

1. Removing

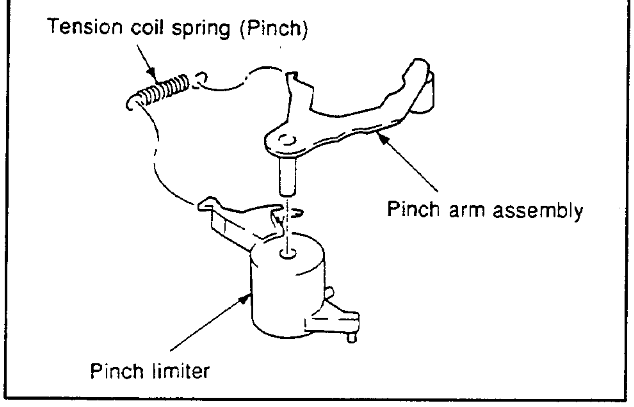
①. Set the UNLOADING position. (Refer to page 5-3.)

②. Pinch arm block assembly.


PH-G Pinch arm block assembly
Claw

Note: After check the phase adjustment PH-G, attach the pinch arm block assembly.

③. Pinch arm assembly and pinch limiter.


Tension coil spring (Pinch)
Pinch arm assembly
Pinch limiter

2. Attaching

❶. Attach the parts in the order of ① → ③ → ②.

❷. Adjust them according to the flow chart (START-3) on page 5-43.

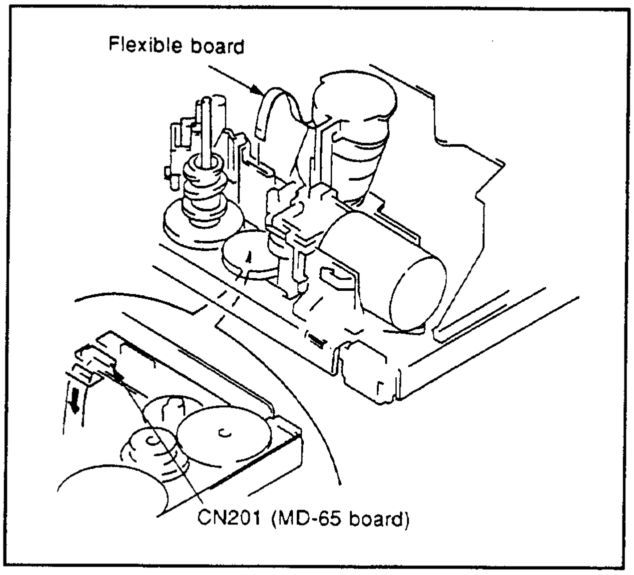
5-6. HC ARM, HC ROLLER ASSEMBLY, PINCH RETAINER, PINCH CAM GEAR AND TG5/6 CATCHER BLOCK ASSEMBLY

1. Removing

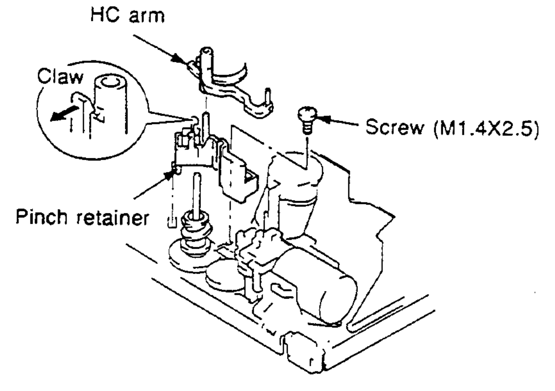
①. Set the UNLOADING position. (Refer to page 5-3.)

②. Pinch arm block assembly. (Refer to 5-5.)

③. Flexible board.

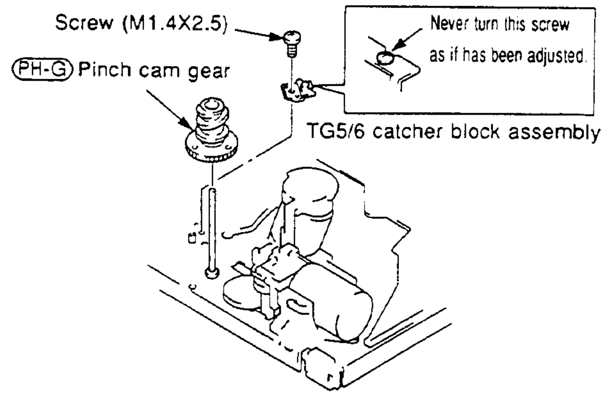

Flexible board
CN201 (MD-65 board)

④. HC arm, HC roller assembly and pinch retainer.


HC arm
Claw
Screw (M1.4X2.5)
Pinch retainer

Fixing torque : 0.0686N•m (0.7 kg•cm)

⑤. Pinch cam gear and TG5/6 catcher block assembly.


Screw (M1.4X2.5)
PH-G Pinch cam gear
Never turn this screw as it has been adjusted.
TG5/6 catcher block assembly

Fixing torque : 0.0686N•m (0.7 kg•cm)

2. Attaching

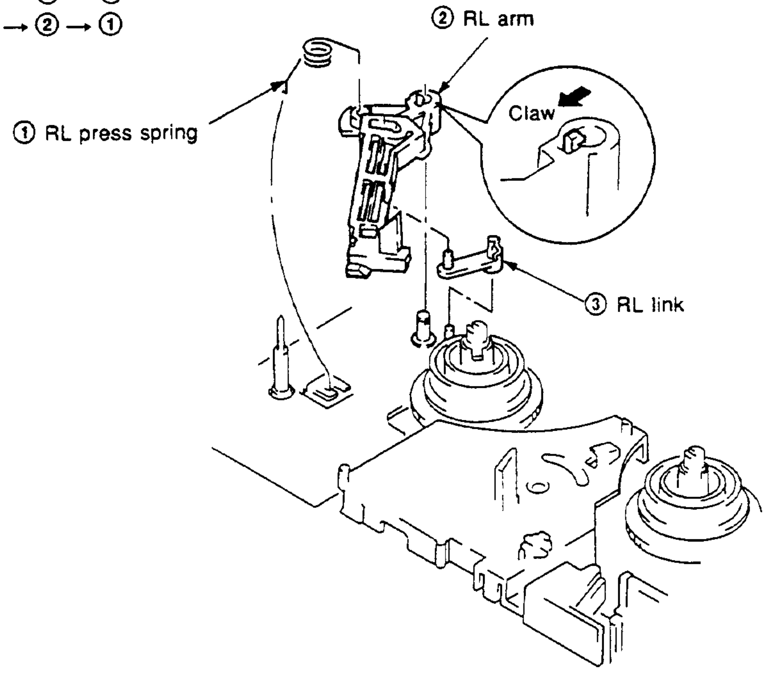
❶. Attach the parts in the order of ① → ⑤ → ④ → ③ → ②.

❷. Adjust them according to the flow chart (START-3) on page 5-43.

5-7. RL ARM AND RL LINK

- **Removing/Attaching** (L cassette position. (Refer to page 5-2.))

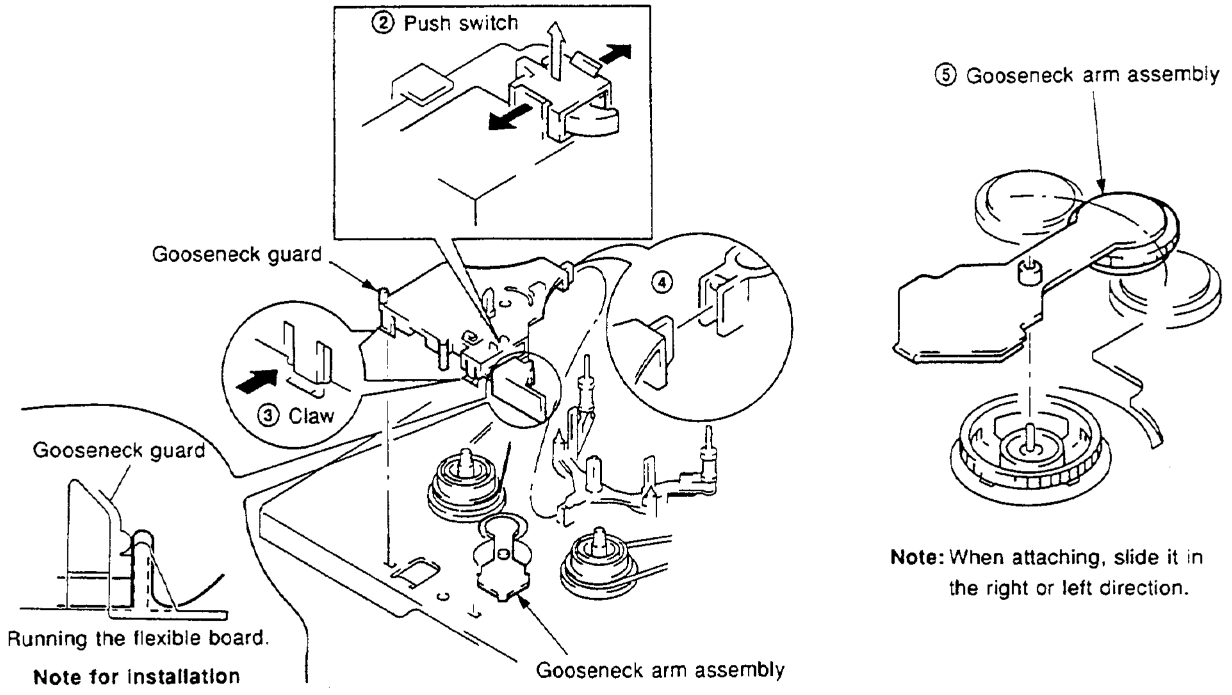
- Removing : ① → ② → ③
- Attaching : ③ → ② → ①


② RL arm
① RL press spring
Claw
③ RL link

5-8. GOOSENECK GUARD AND GOOSENECK ARM ASSEMBLY

- **Removing/Attaching** (L cassette position. (Refer to page 5-2.))

- Removing : ① Remove the RL arm. (Refer to 4-7.) → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①


② Push switch
⑤ Gooseneck arm assembly
Gooseneck guard
④
③ Claw
Gooseneck guard
Running the flexible board.
Note for Installation
Gooseneck arm assembly

Note: When attaching, slide it in the right or left direction.

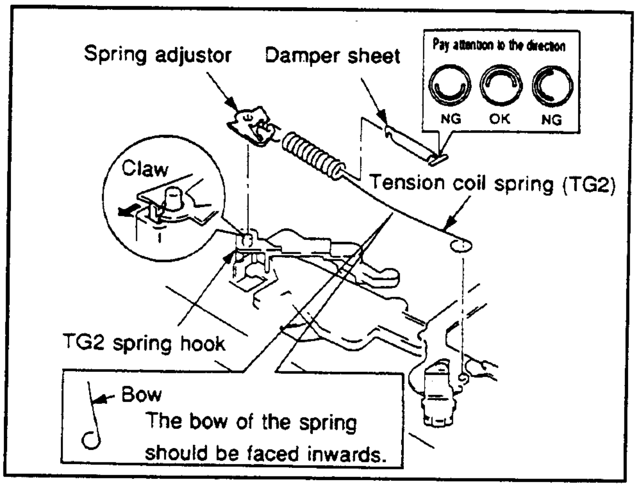
(PH-T) : Page 5-11

5-9. TENSION COIL SPRING (TG2), SPRING ADJUSTOR, TG2 SPRING HOOK, TG2 SELECTION ARM AND DAMPER SHEET

1. Removing

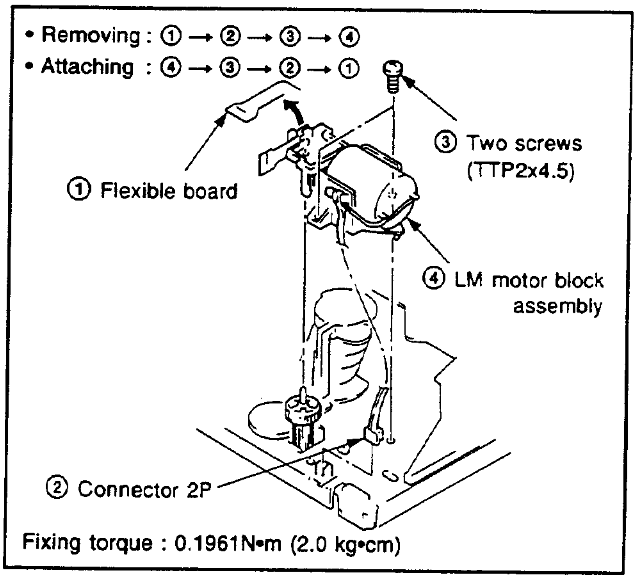
①. Set the UNLOADING position. (Refer to page 5-3.)

②. Tension coil spring (TG2) and spring adjustor.



Spring adjustor
Damper sheet
Pay attention to the direction
NG
OK
NG
Claw
Tension coil spring (TG2)
TG2 spring hook
Bow
The bow of the spring should be faced inwards.

③. LM motor block assembly.

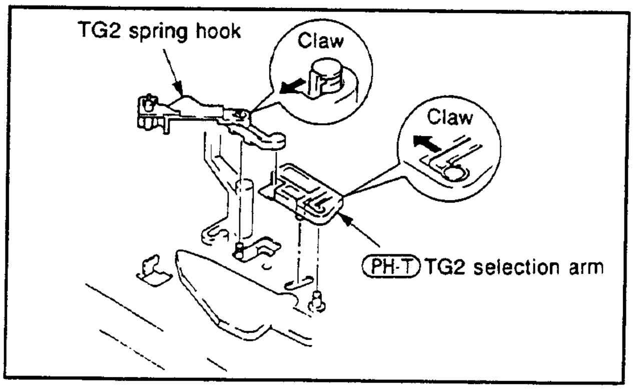


- Removing : ① → ② → ③ → ④
- Attaching : ④ → ③ → ② → ①

③ Two screws (TTP2x4.5)
① Flexible board
④ LM motor block assembly
② Connector 2P

Fixing torque : 0.1961N•m (2.0 kg•cm)

④. TG2 spring hook and TG2 selection arm.



TG2 spring hook
Claw
Claw
(PH-T) TG2 selection arm

2. Attaching

❶. Attach the parts in the order of ① → ④ → ② → ③.

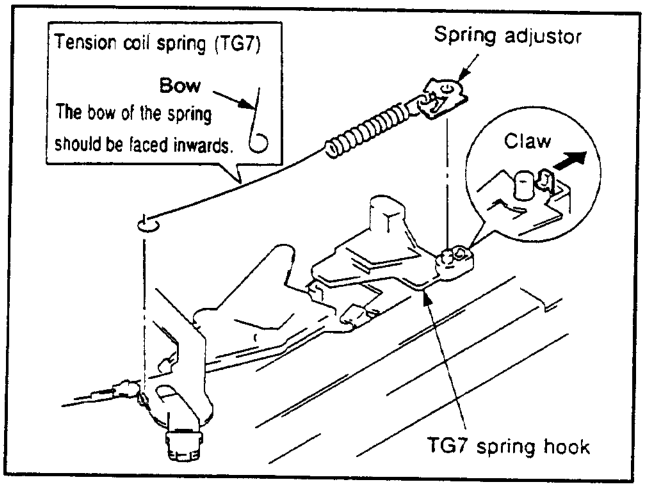
❷. Adjust them according to the flow chart (START-2) on page 5-43.

5-10. TENSION COIL SPRING (TG7), SPRING ADJUSTOR AND TG7 SPRING HOOK

1. Removing

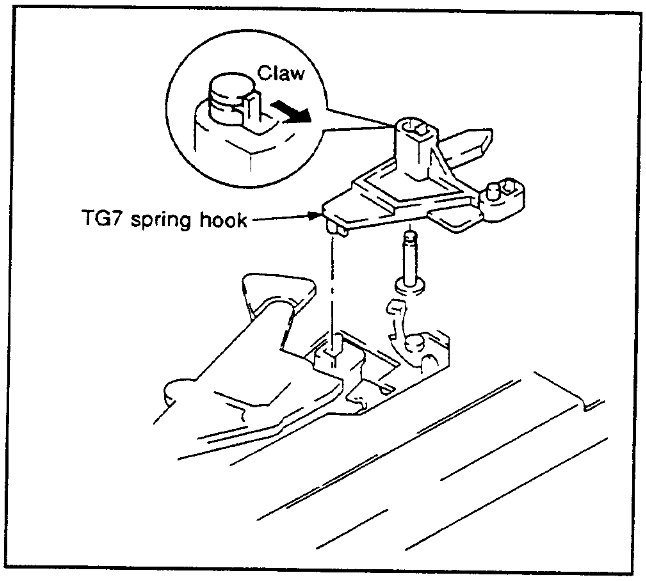
①. Set the UNLOADING position. (Refer to page 5-3.)

②. Tension coil spring (TG7) and spring adjustor.



Tension coil spring (TG7)
Bow
The bow of the spring should be faced inwards.
Spring adjustor
Claw
TG7 spring hook

③. TG7 spring hook.



Claw
TG7 spring hook

2. Attaching

❶. Attach the parts in the order of ① → ③ → ②.

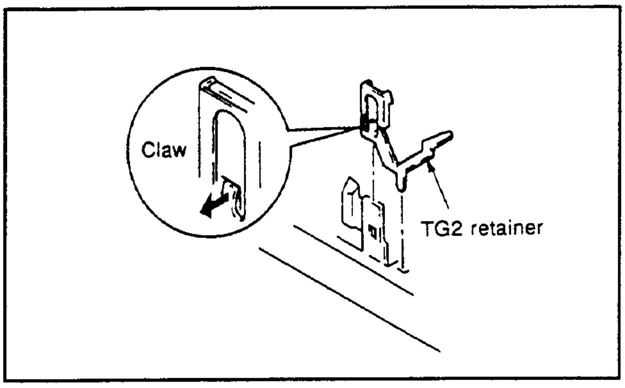
❷. Adjust them according to the flow chart (START-2) on page 5-43.

5-11. TG2 RETAINER, TG2 ARM ASSEMBLY (TG2 PLATE SPRING AND ET MAGNET) S TENSION REGULATOR BAND ASSEMBLY AND TG2 LOAD ARM ASSEMBLY

1. Removing

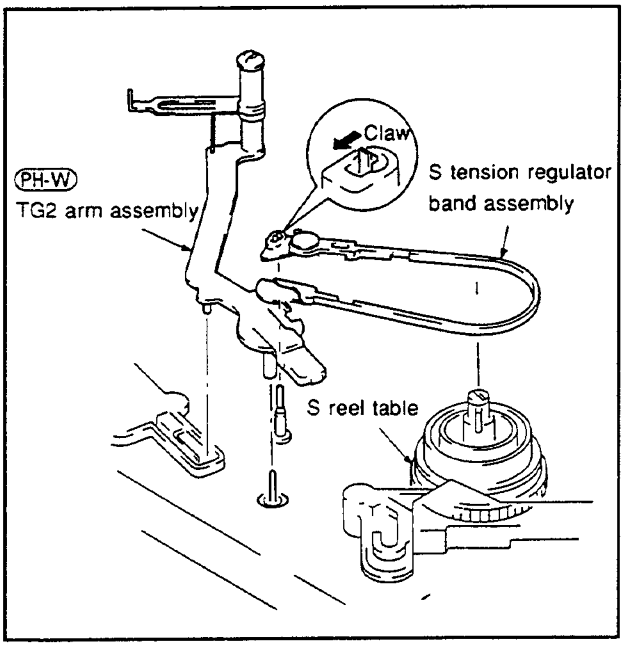
①. Tension coil spring (TG2), spring adjustor, LM motor block assembly and TG2 spring hook. (Refer to 5-9.)

②. TG2 retainer.

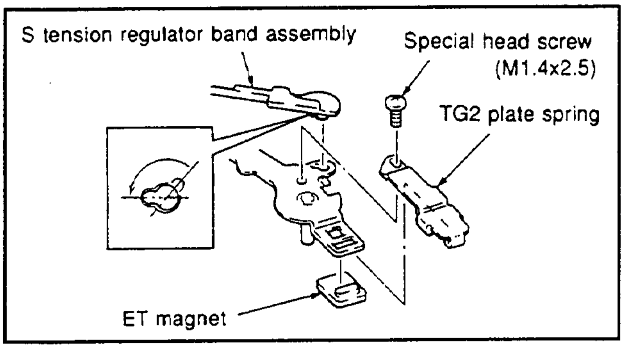

Claw
TG2 retainer

③. Set the (LOADING) position. (Refer to page 5-3.)

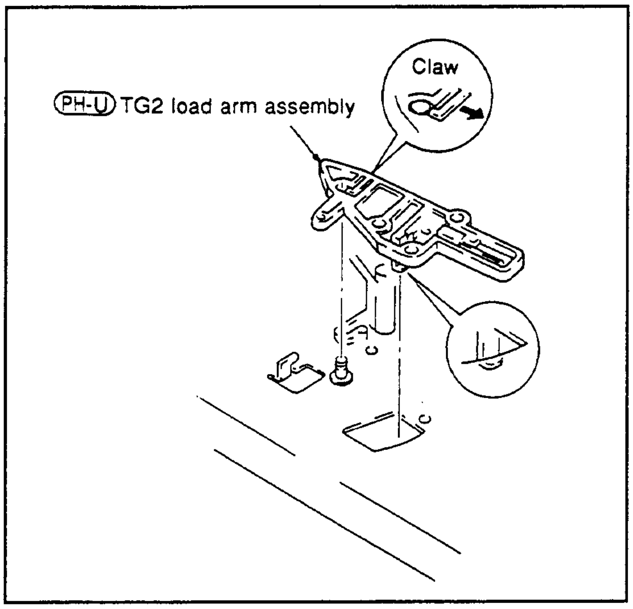
④. TG2 arm assembly and S tension regulator band assembly.


Claw
(PH-W)
TG2 arm assembly
S tension regulator band assembly
S reel table

⑤. S tension regulator band assembly, TG2 plate spring and ET magnet.


S tension regulator band assembly
Special head screw (M1.4x2.5)
TG2 plate spring
ET magnet

⑥. TG2 load arm assembly.


Claw
(PH-U) TG2 load arm assembly

2. Attaching

❶. Set the (UNLOADING) position. (Refer to page 5-3.)

❷. Attach the parts in the order of ⑥ → ③ → ⑤ → ④ → ② → ①.

❸. Operation check: (LOADING) / (UNLOADING). (Refer to page 5-3.)

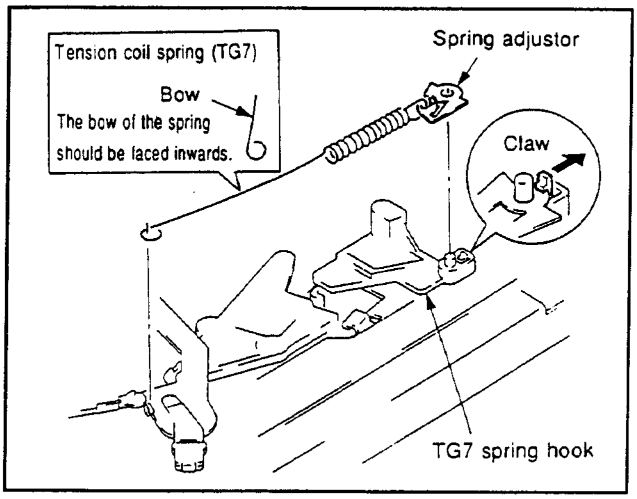
❹. Adjust them according to the flow chart (START-2) on page 5-43.

PH-V , PH-X : Page 5-11

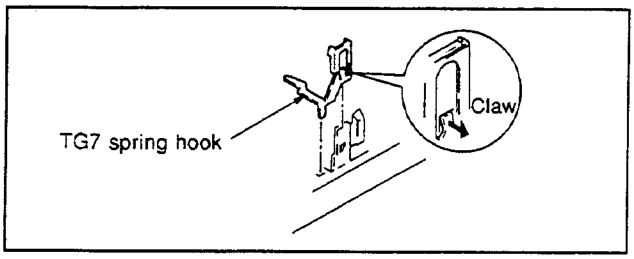
5-12. TG7 RETAINER, TG7 ARM ASSEMBLY (TG7 PLATE SPRING AND ET MAGNET) T TENSION REGULATOR BAND ASSEMBLY AND TG7 LOAD ARM ASSEMBLY

1. Removing

①. Tension coil spring (TG7), spring adjustor.

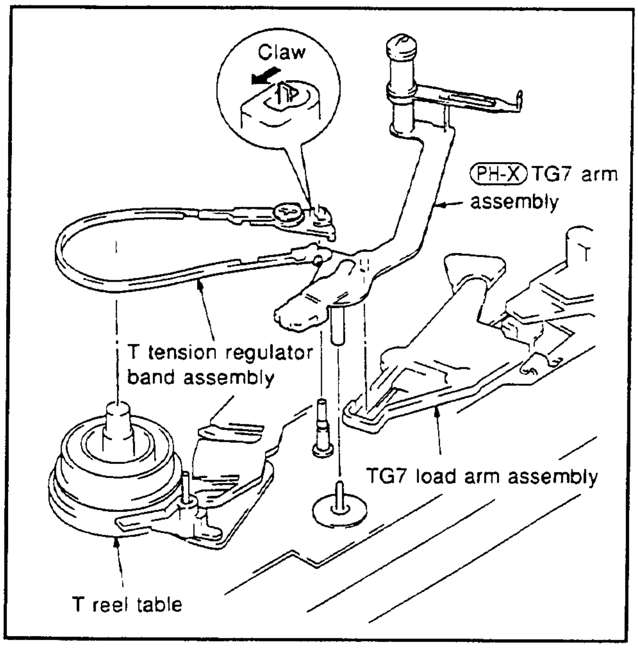

Tension coil spring (TG7)
Bow
The bow of the spring should be faced inwards.
Spring adjustor
Claw
TG7 spring hook

②. TG7 spring hook.

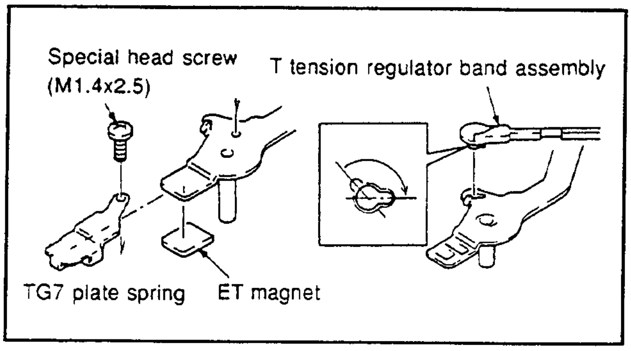

TG7 spring hook
Claw

③. Set the LOADING position. (Refer to page 5-3.)

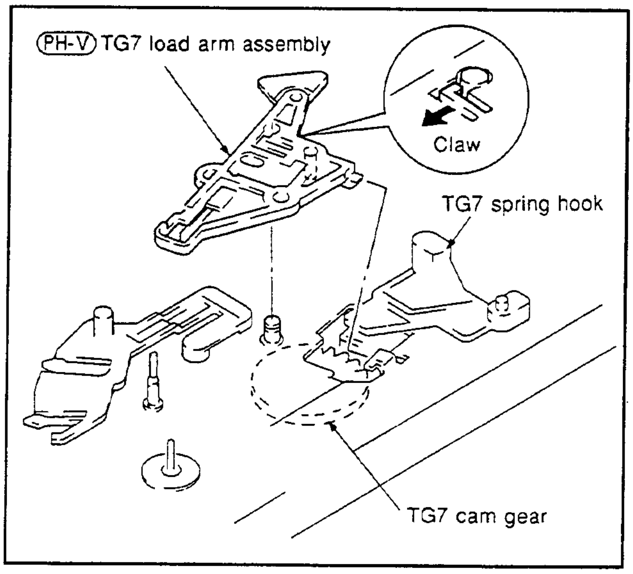
④. TG7 arm assembly and T tension regulator band assembly.


Claw
PH-X TG7 arm assembly
T tension regulator band assembly
TG7 load arm assembly
T reel table

⑤. TG7 plate spring, ET magnet and T tension regulator band assembly.


Special head screw (M1.4x2.5)
T tension regulator band assembly
TG7 plate spring
ET magnet

⑥. TG7 load arm assembly.


PH-V TG7 load arm assembly
Claw
TG7 spring hook
TG7 cam gear

2. Attaching

❶. Set the UNLOADING position. (Refer to page 5-3.)

❷. Attach the parts in the order of ⑥ → ③ → ⑤ → ④ → ② → ①.

❸. Operation check: LOADING / UNLOADING . (Refer to page 5-3.)

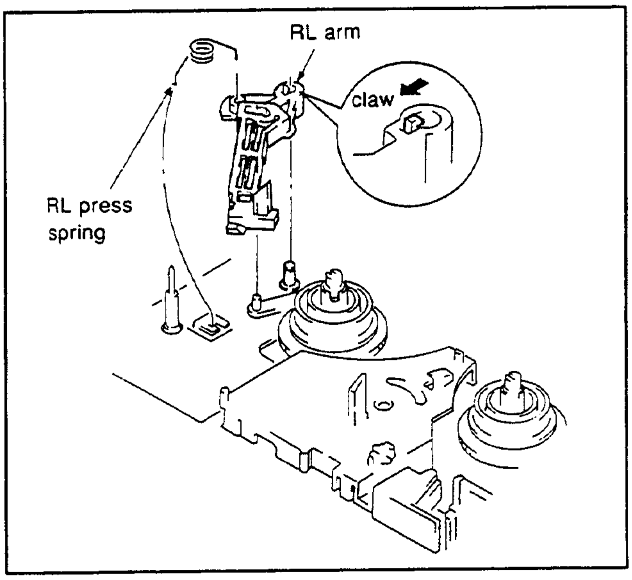
❹. Adjust them according to the flow chart (START-2) on page 5-43.

5-13. S REEL TABLE BLOCK ASSEMBLY

1. Removing

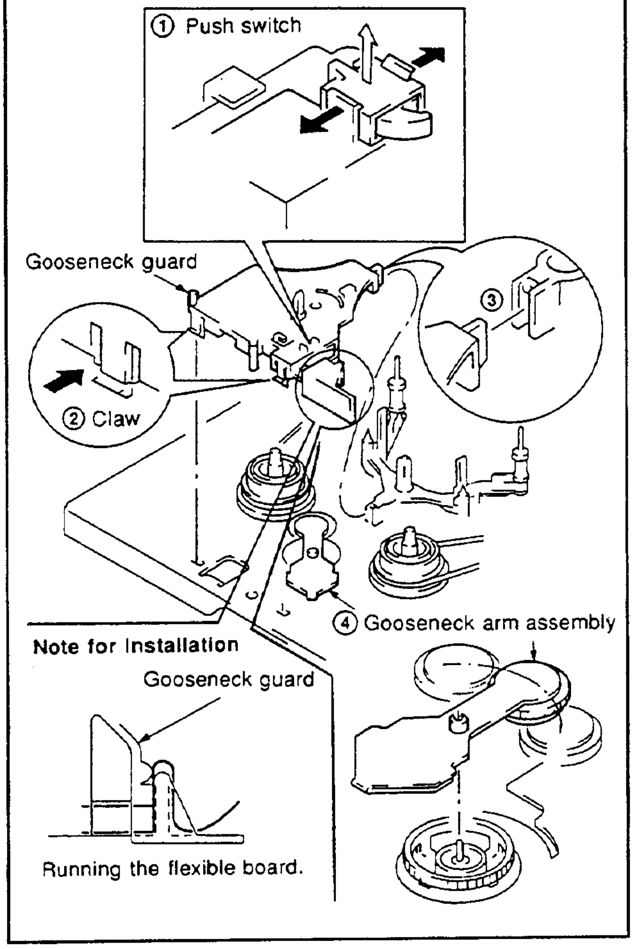
① Set the **(L cassette)** position. (Refer to page 5-2.)

② RL arm.

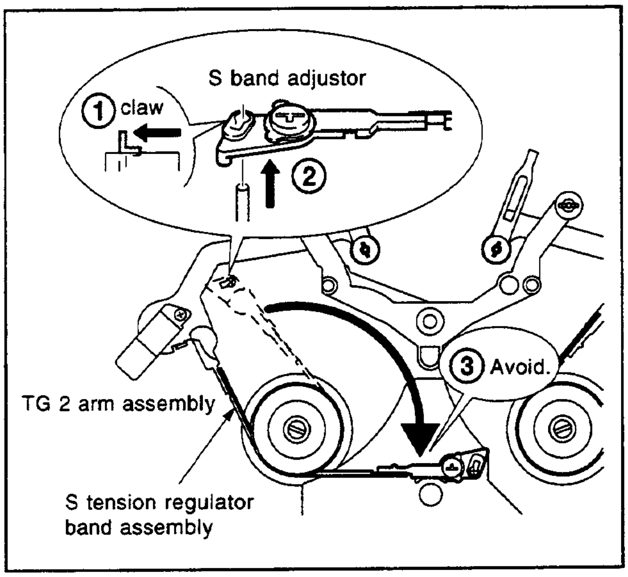

RL arm
claw
RL press spring

③ Gooseneck guard.

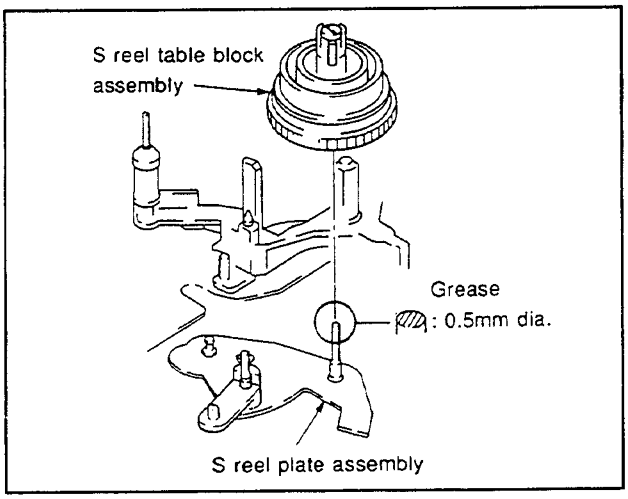
- Removing : ① → ② → ③ → ④
- Attaching : ④ → ③ → ② → ①


① Push switch
Gooseneck guard
③
② Claw
④ Gooseneck arm assembly
Note for Installation
Gooseneck guard
Running the flexible board.

④ S band adjustor.


S band adjustor
① claw
②
③ Avoid.
TG 2 arm assembly
S tension regulator band assembly

⑤ S reel table block assembly.


S reel table block assembly
Grease
▨: 0.5mm dia.
S reel plate assembly

2. Attaching

❶ Attach the parts in the order of ① → ⑤ → ④ → ③ → ②.

❷ Adjust them according to the flow chart (START-1) on page 5-43

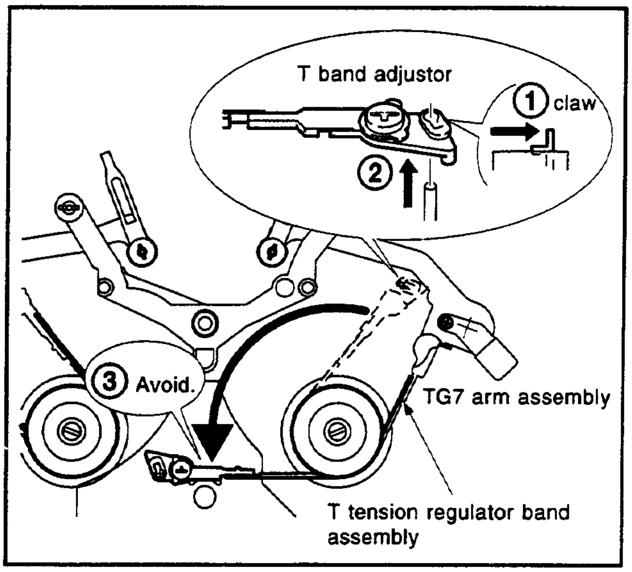
(PH-Q) : Page 5-10

5-14. T REEL HOLDER AND T REEL TABLE BLOCK ASSEMBLY

1. Removing

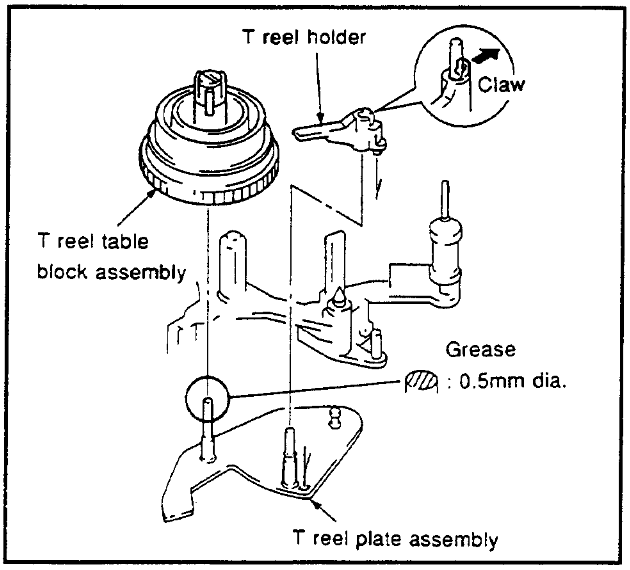
①. Set the (L cassette) position. (Refer to page 5-2.)

②. T band adjustor.



T band adjustor
① claw
②
③ Avoid.
TG7 arm assembly
T tension regulator band assembly

③. T reel holder and T reel table block assembly.



T reel holder
Claw
T reel table block assembly
Grease
: 0.5mm dia.
T reel plate assembly

2. Attaching

❶. Attach the parts in the order of ① → ③ → ②.

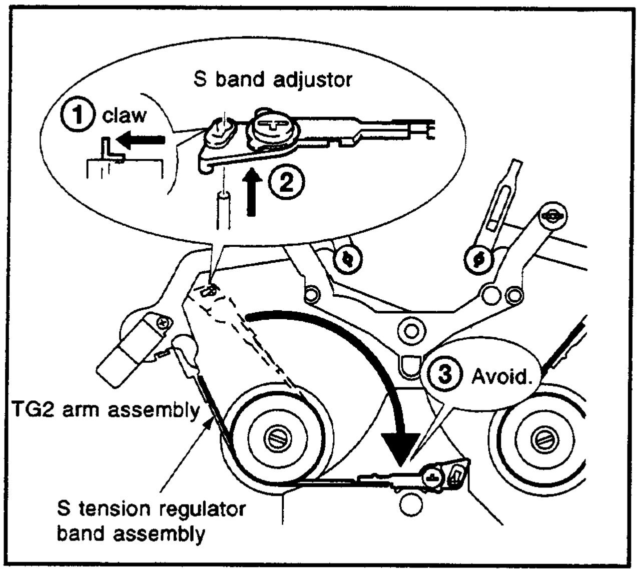
❷. Adjust them according to the flow chart (START-1) on page 5-43.

5-15. S REEL PLATE ASSEMBLY

1. Removing

①. Set the (L cassette) position. (Refer to page 5-2.)

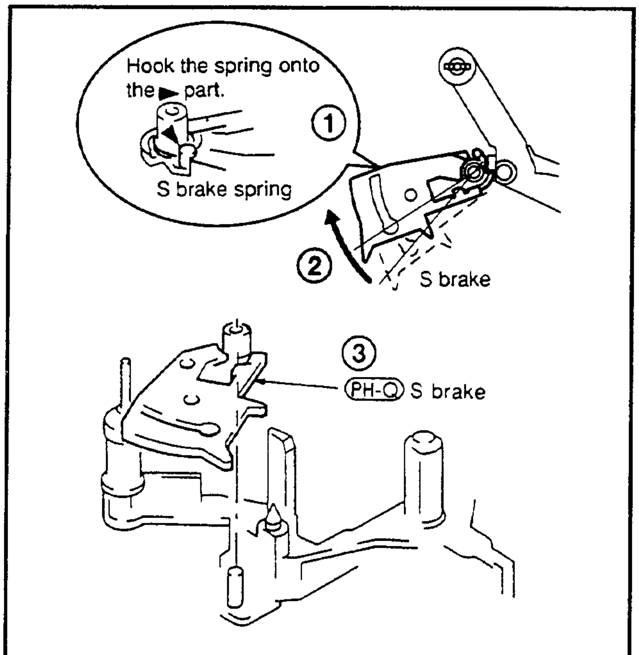
②. S band adjustor.



S band adjustor
① claw
②
③ Avoid.
TG2 arm assembly
S tension regulator band assembly

③. Set the (LOADING) position. (Refer to page 5-3.)

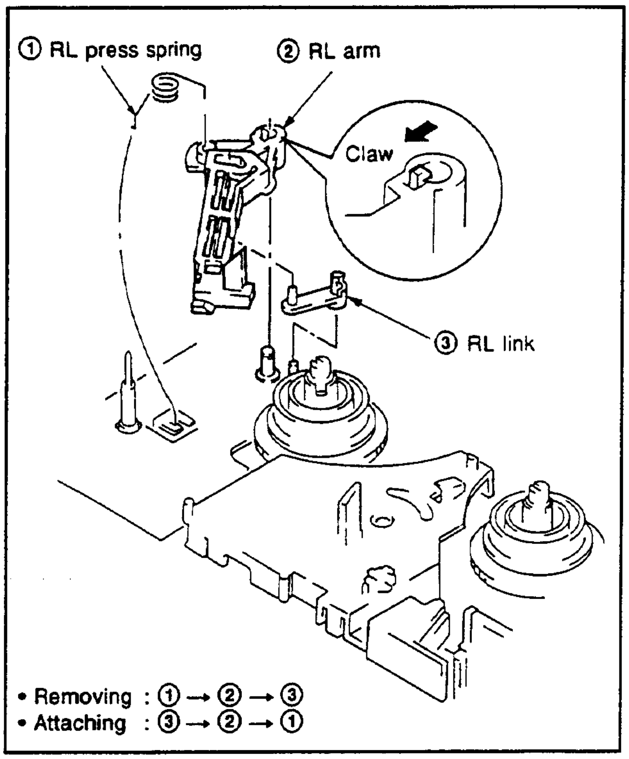
④. S brake.



Hook the spring onto the ▶ part.
①
S brake spring
②
S brake
③
(PH-Q) S brake

- Removing : ① → ② → ③
- Attaching : ③ → ② → ①

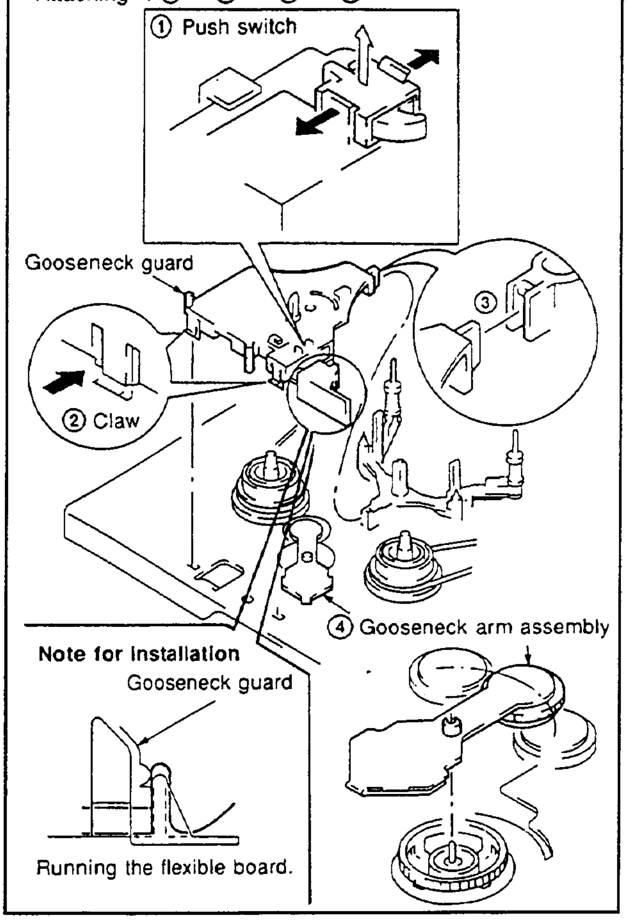
⑤. RL arm and RL link.


① RL press spring
② RL arm
Claw
③ RL link

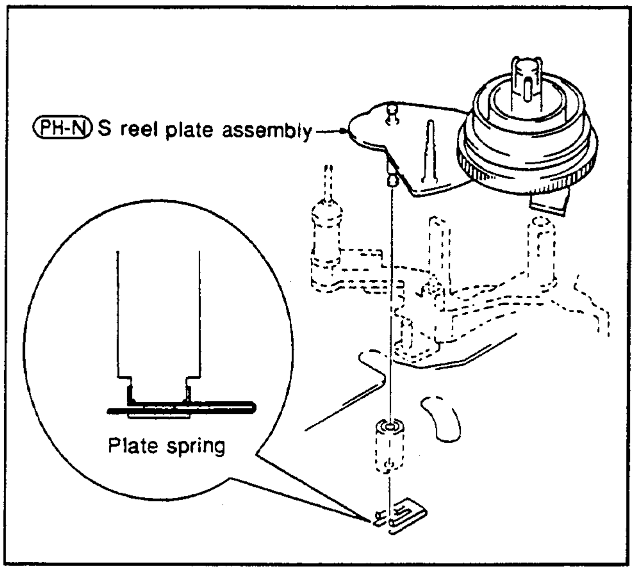
- Removing : ① → ② → ③
- Attaching : ③ → ② → ①

⑥. Gooseneck guard.

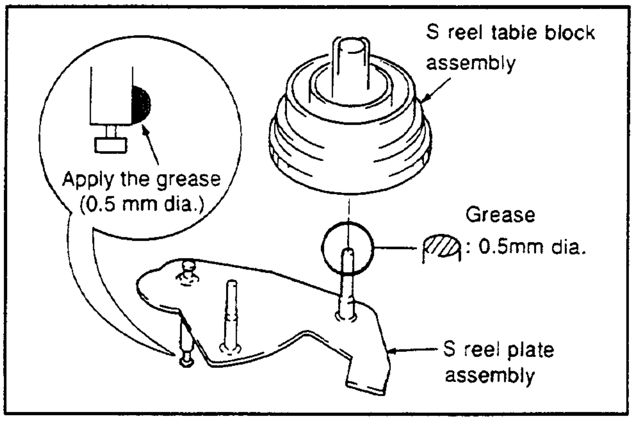
- Removing : ① → ② → ③ → ④
- Attaching : ④ → ③ → ② → ①


① Push switch
Gooseneck guard
③
② Claw
④ Gooseneck arm assembly
Note for Installation
Gooseneck guard
Running the flexible board.

⑦. Plate spring.


PH-N S reel plate assembly
Plate spring

⑧. S reel plate assembly.


S reel table block assembly
Apply the grease (0.5 mm dia.)
Grease
▨: 0.5mm dia.
S reel plate assembly

2. Attaching

❶. Attach the parts in the order of ① → ⑧ → ⑦ → ④ → ③ → ② → ⑥ → ⑤.

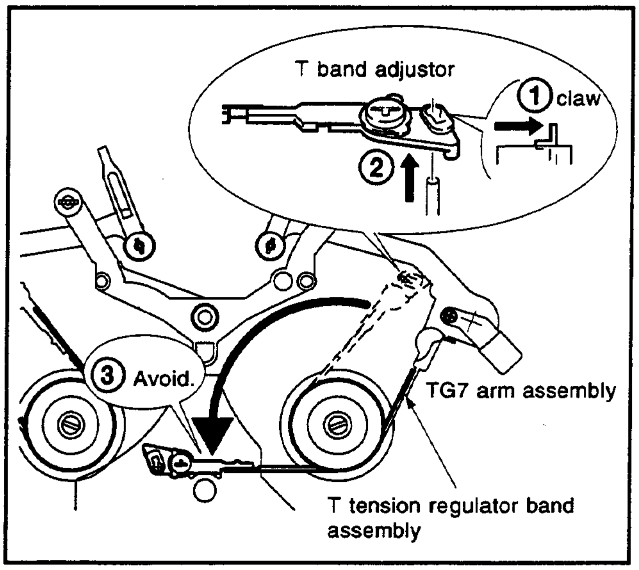
❷. Adjust them according to the flow chart (START-1) on page 5-43.

5-16. T REEL PLATE ASSEMBLY

1. Removing

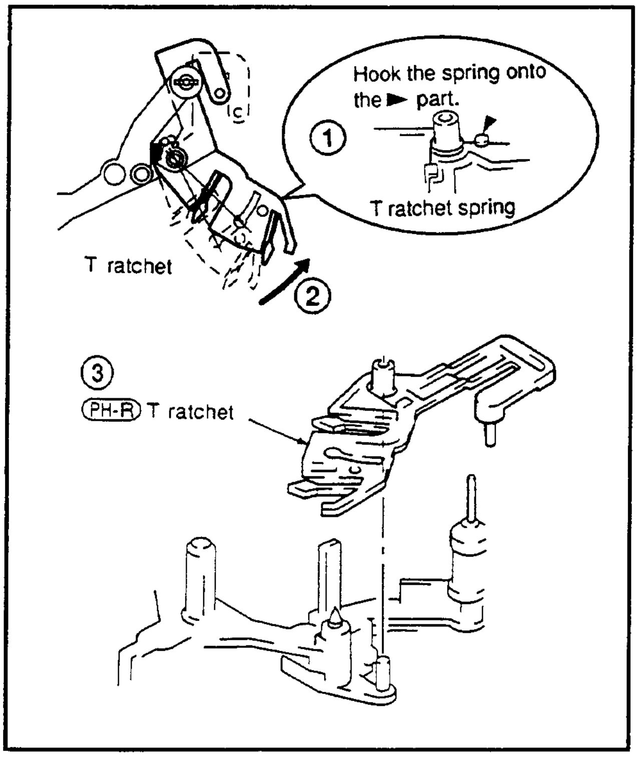
①. Set the **(L cassette)** position. (Refer to page 5-2.)

②. T band adjustor.

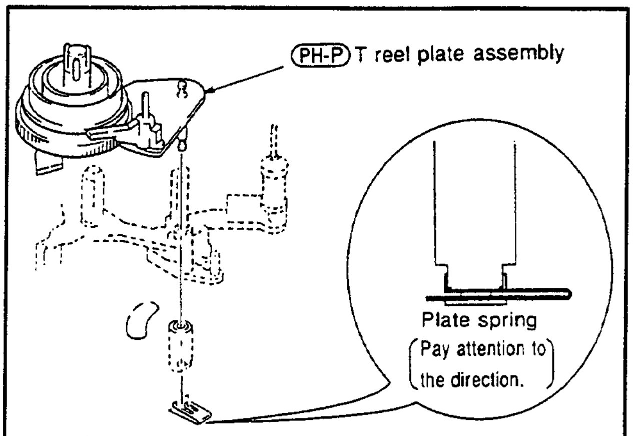

T band adjustor
① claw
②
③ Avoid.
TG7 arm assembly
T tension regulator band assembly

③. Set the **(LOADING)** position. (Refer to page 5-3.)

④. T ratchet.

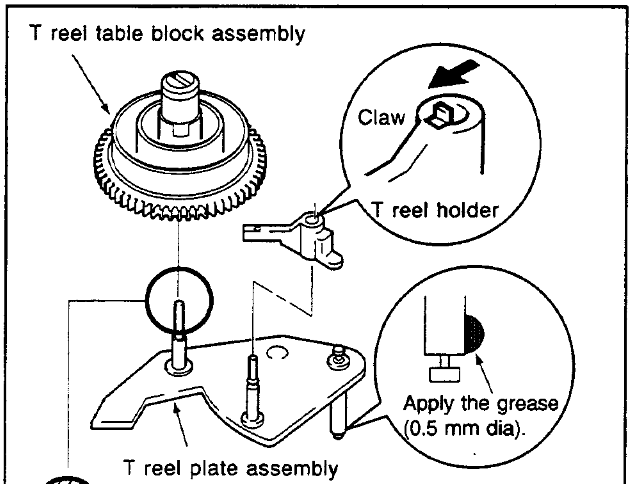

Hook the spring onto the ► part.
①
T ratchet spring
T ratchet
②
③
(PH-R) T ratchet

⑤. Plate spring.


(PH-P) T reel plate assembly
Plate spring
(Pay attention to the direction.)

Note: Pay attention to the direction of plate spring.

⑥. T reel plate assembly.


T reel table block assembly
Claw
T reel holder
Apply the grease (0.5 mm dia).
T reel plate assembly

▨ part : Apply the grease (0.5 mm dia).

2. Attaching

❶. Attach the parts in the order of ① → ⑥ → ⑤ → ③ → ④ → ②.

❷. Adjust them according to the flow chart (START-1) on page 5-43.

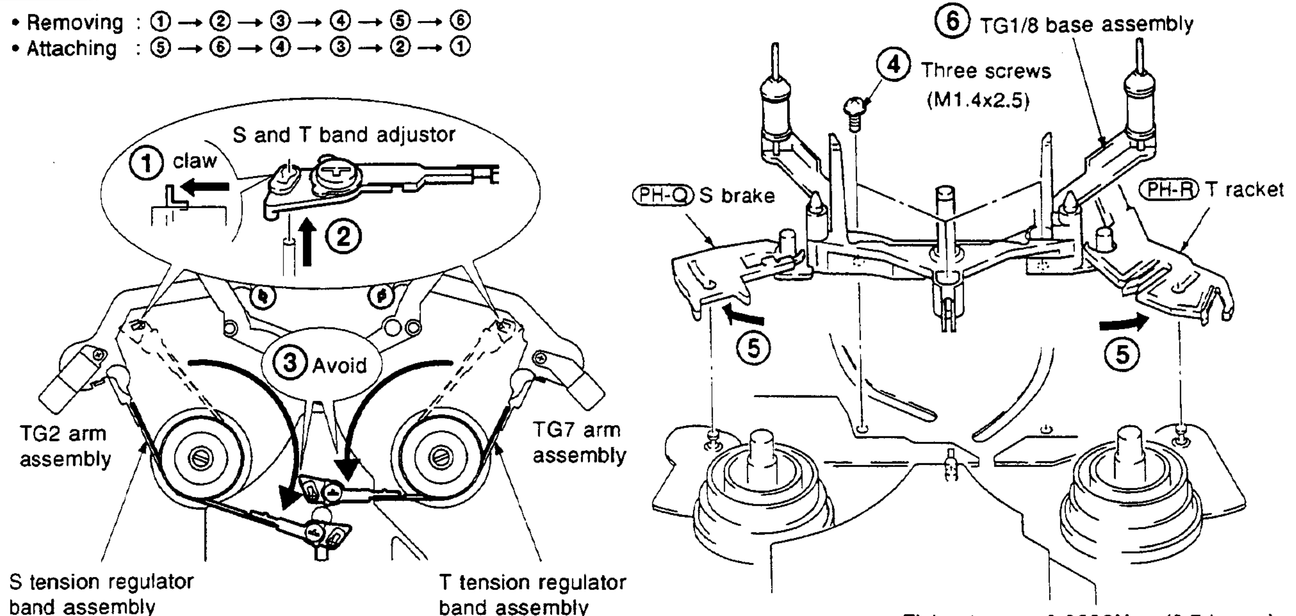
5-17. TG1/8 BASE ASSEMBLY, S BRAKE AND T RATCHET

1. Removing

①. Set the **LOADING** / **L cassette** positions. (Refer to pages 5-2 to 5-3.)

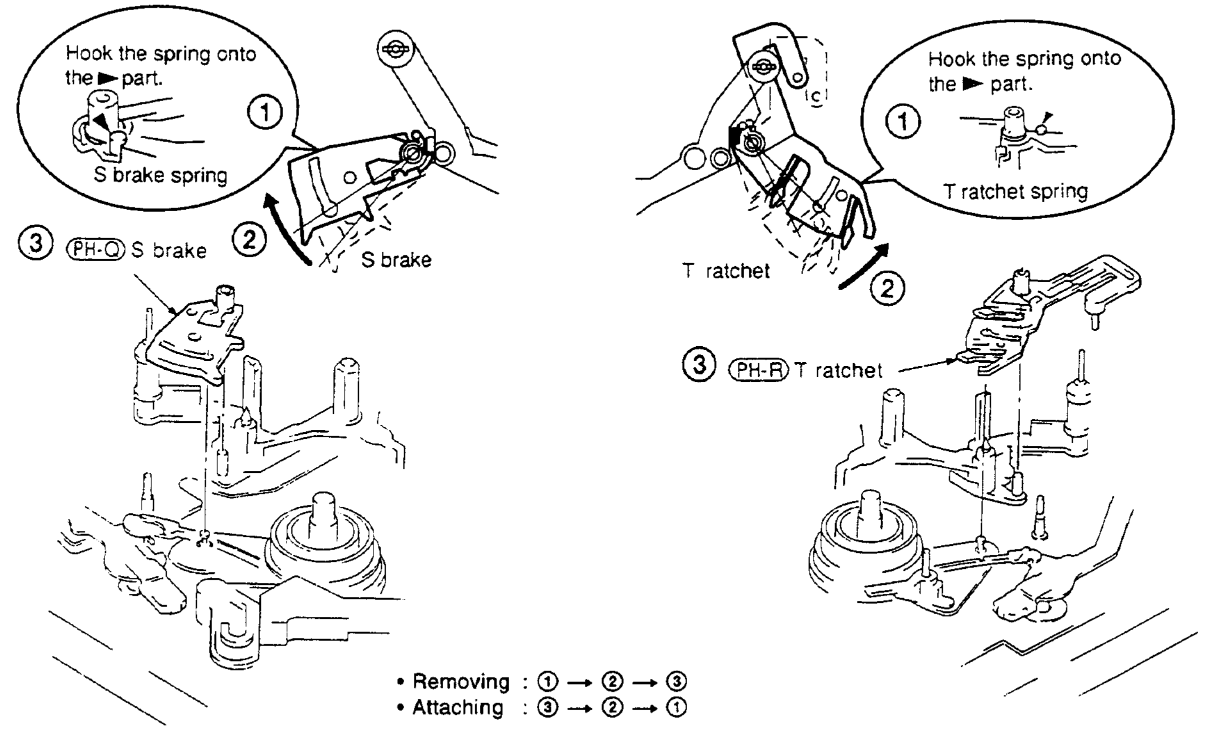
②. TG1/8 base assembly.

- Removing : ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑤ → ⑥ → ④ → ③ → ② → ①


⑥ TG1/8 base assembly
④ Three screws (M1.4x2.5)
S and T band adjustor
① claw
②
③ Avoid
PH-Q S brake
PH-R T racket
⑤
⑤
TG2 arm assembly
TG7 arm assembly
S tension regulator band assembly
T tension regulator band assembly

Fixing torque: 0.0686N•m (0.7 kg•cm)

③. S brake and T ratchet.


Hook the spring onto the ► part.
①
S brake spring
③ PH-Q S brake
②
S brake
Hook the spring onto the ► part.
①
T ratchet spring
T ratchet
②
③ PH-R T ratchet

- Removing : ① → ② → ③
- Attaching : ③ → ② → ①

2. Attaching

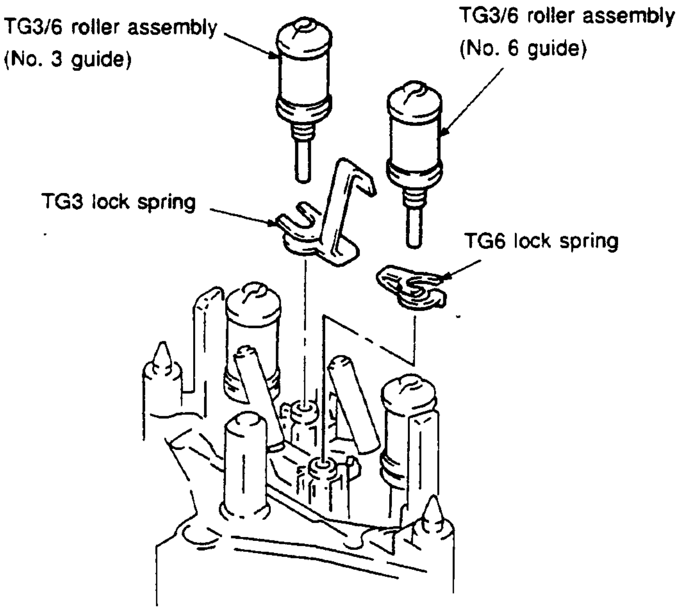
❶. Attach the parts in the order of ① → ③ → ②.

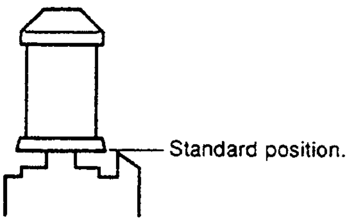
❷. Adjust them according to the flow chart (START-2) on page 5-43.

5-18. TG3/6 ROLLER ASSEMBLY AND TG3/6 LOCK SPRING

• Removing/Attaching

Note: (UNLOADING) position. (Refer to page 5-3.)


TG3/6 roller assembly
(No. 3 guide)
TG3/6 roller assembly
(No. 6 guide)
TG3 lock spring
TG6 lock spring


Standard position.

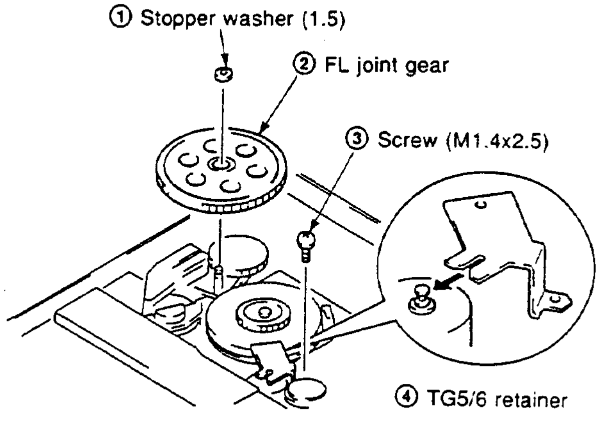
Preset the height as shown in the figure.

Note: After attaching each part, adjust them according to the flow chart (START-3) on page 5-43.

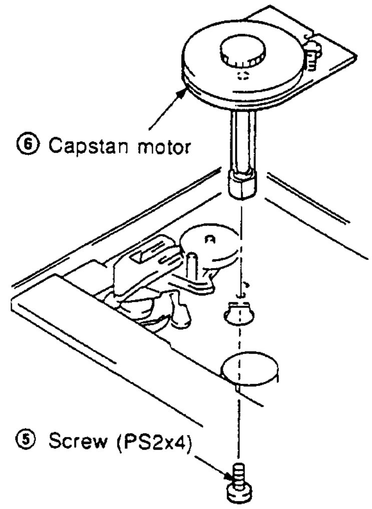
5-19. FL JOINT GEAR, TG5/6 RETAINER AND CAPSTAN MOTOR

• Removing/Attaching

- Removing : ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ①


① Stopper washer (1.5)
② FL joint gear
③ Screw (M1.4x2.5)
④ TG5/6 retainer

Fixing torque ③: 0.0686N•m (0.7 kg•cm)


⑥ Capstan motor
⑤ Screw (PS2x4)

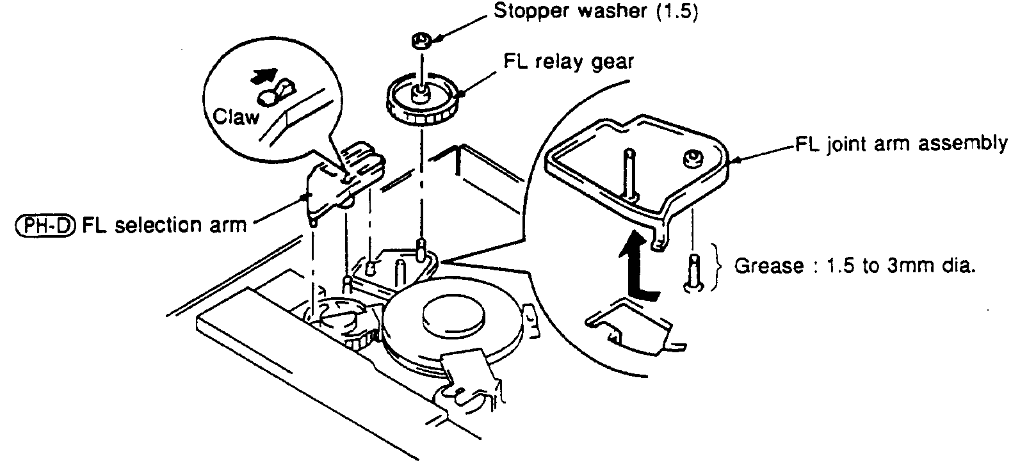
Fixing torque ⑤: 0.1961N•m (2.0 kg•cm)

(PH-A): Page 5-6
(PH-D), (PH-G): Page 5-7

5-20. FL SELECTION ARM, FL RELAY GEAR AND FL JOINT ARM ASSEMBLY

- **Removing/Attaching**

Note: First, remove the FL joint gear. (Refer to 4-19.)

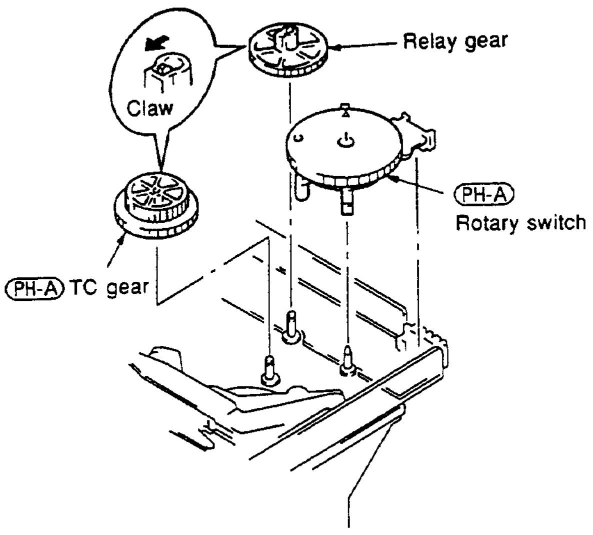

Stopper washer (1.5)
FL relay gear
Claw
FL joint arm assembly
(PH-D) FL selection arm
Grease : 1.5 to 3mm dia.

5-21. ROTARY SWITCH, TC GEAR AND RELAY GEAR

1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3.)

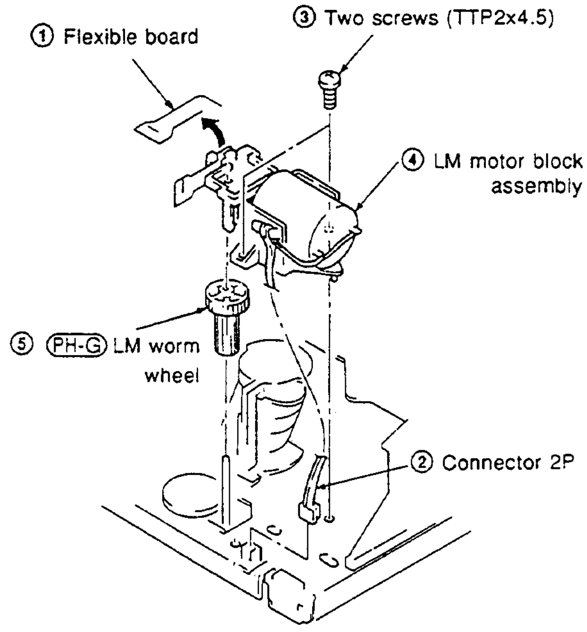
②. Rotary switch, TC gear and relay gear.


Relay gear
Claw
(PH-A)
Rotary switch
(PH-A) TC gear

2. Attaching

❶. Remove the LM motor block assembly and LM worm wheel. (To synchronize phase of the pinch driving system (front side) and the loading driving system (back side)).

- Removing : ① → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①


③ Two screws (TTP2x4.5)
① Flexible board
④ LM motor block assembly
⑤ (PH-G) LM worm wheel
② Connector 2P

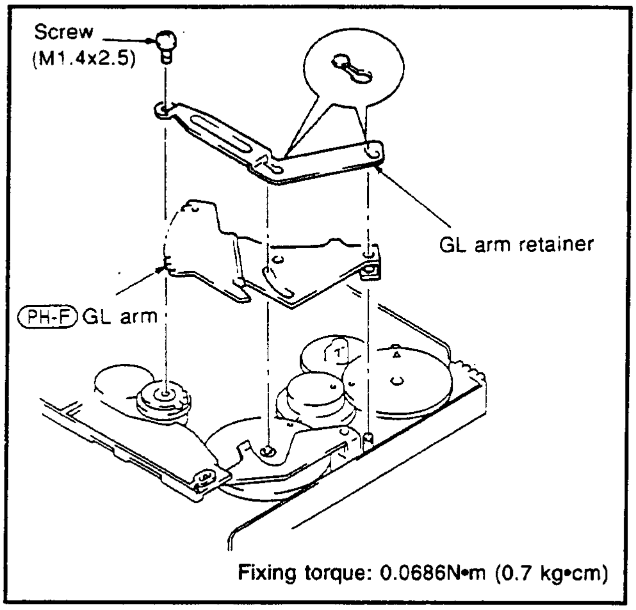
Fixing torque: 0.1961N•m (2.0 kg•cm)

❷. Attach the TC gear, relay gear and rotary switch.

❸. Attach the LM worm wheel and LM motor block assembly.

5-22. GL ARM RETAINER AND GL ARM

- **Removing/Attaching** ((UNLOADING) position. (Refe to page 5-3.))


Screw
(M1.4x2.5)
GL arm retainer
(PH-F) GL arm
Fixing torque: 0.0686N•m (0.7 kg•cm)

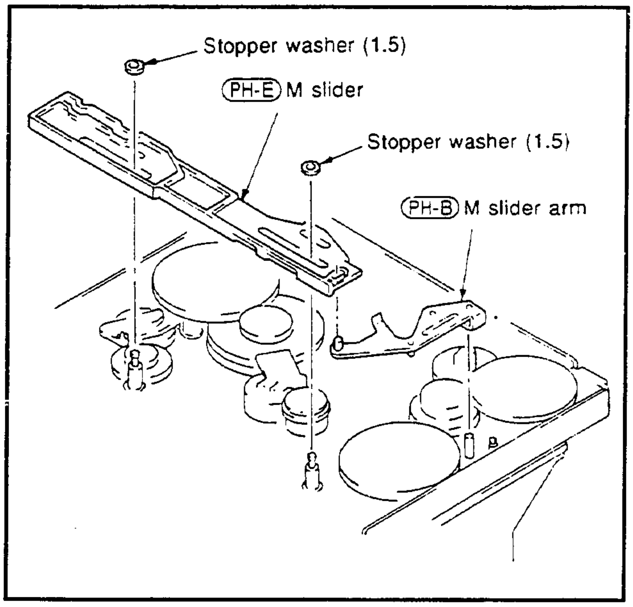
5-23. M SLIDER AND M SLIDER ARM

1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3.)

②. GL arm retainer and GL arm. (Refer to 5-22.)

③. M slider and M slider arm.


Stopper washer (1.5)
(PH-E) M slider
Stopper washer (1.5)
(PH-B) M slider arm

2. Attaching

- Attach the parts in the order of ① → ③ → ②.

5-24. TG7 SELECTION ARM, TG7 CAM GEAR AND T CAM GEAR

1. Removing

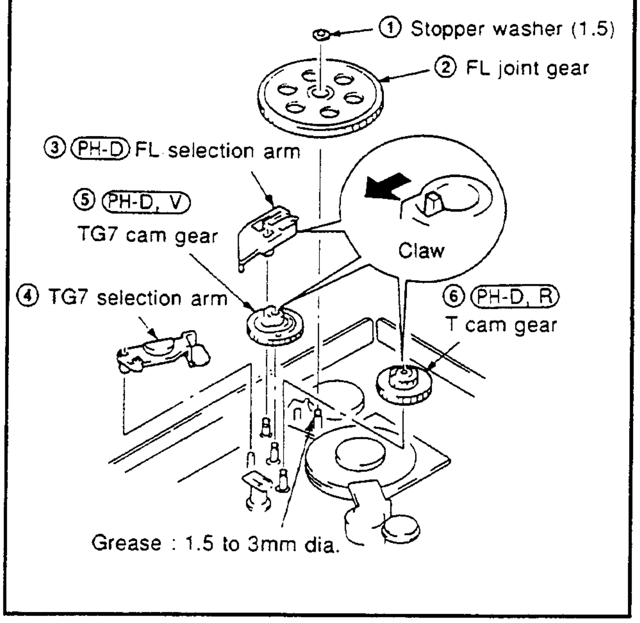
①. Set the (UNLOADING) position. (Refer to page 5-3.)

②. GL arm retainer and GL arm. (Refer to 5-22.)

③. M slider and M slider arm. (Refer to 5-23.)

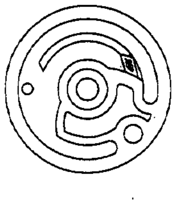
④. TG7 selection arm, TG7 cam gear and T cam gear.

- Removing : ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ①


① Stopper washer (1.5)
② FL joint gear
③ (PH-D) FL selection arm
⑤ (PH-D, V)
TG7 cam gear
Claw
④ TG7 selection arm
⑥ (PH-D, R)
T cam gear
Grease : 1.5 to 3mm dia.

2. Attaching

❶. Attach the parts in the order of ① → ④ → ③ → ②.



T cam gear
(T ratchet driving side)

Cam groove on the T cam gear.

Apply the grease (3mm dia) to of cam groove (▨ part).

(PH-A) : Page 5-6
(PH-G) : Page 5-7
(PH-T) , (PH-U) : Page 5-11

5-25. MAIN CAM, TG2 SL ARM ASSEMBLY AND TENSION COIL SPRING (TG2 SL)

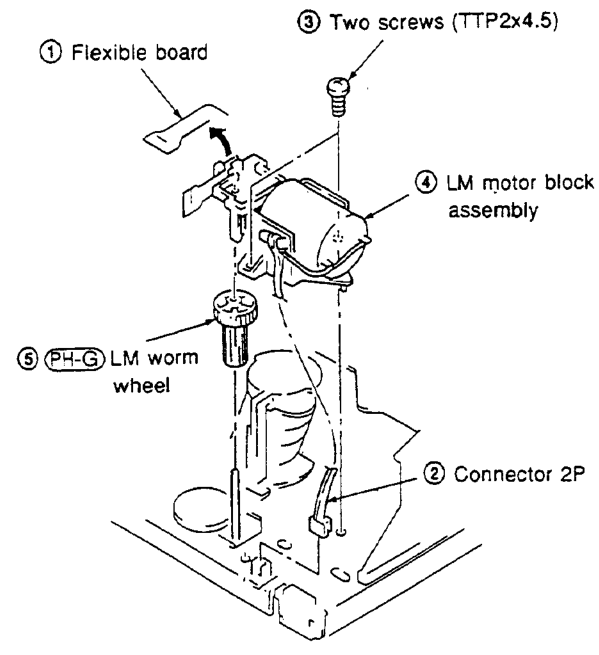
The two grooves on one side of the main cam drive the TG2 selection arm and the TG2 load arm assembly.
Since it is difficult to attach the main cam, fix the TG2 selection arm and the TG2 load arm assembly with the main cam's phase adjusted correctly (Nearly unloading position (Refer to 3-1. PHASE ADJUSTMENT Ⓐ.)) before removing the main cam. This facilitates attachment later. If the fixed parts moved, refer to "5-1-3. PHASE ADJUSTMENTS".

1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3.)

②. LM motor block assembly and LM worm wheel.

- Removing : ① → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①

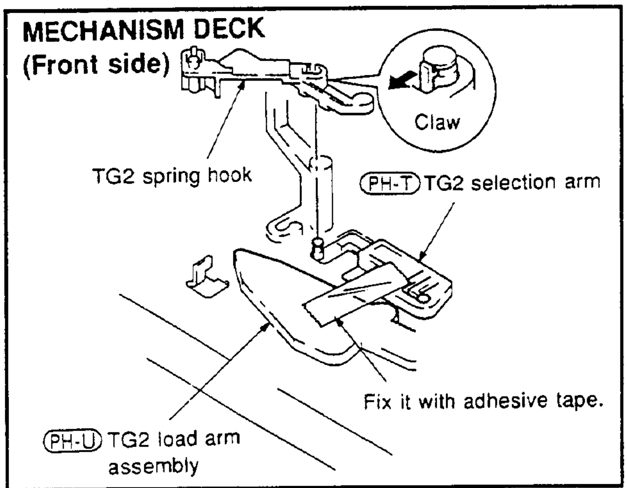

③ Two screws (TTP2x4.5)
① Flexible board
④ LM motor block assembly
⑤ (PH-G) LM worm wheel
② Connector 2P

Fixing torque: 0.1961N•m (2.0 kg•cm)

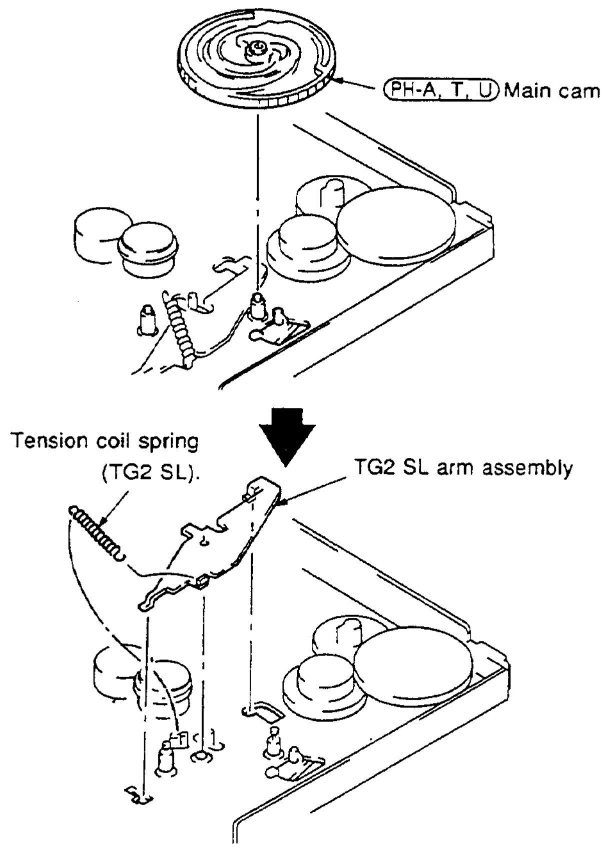
③. GL arm retainer and GL arm. (Refer to 5-22.)

④. M slider and M slider arm. (Refer to 5-23.)

⑤. TG2 spring hook.


MECHANISM DECK
(Front side)
Claw
TG2 spring hook
(PH-T) TG2 selection arm
Fix it with adhesive tape.
(PH-U) TG2 load arm assembly

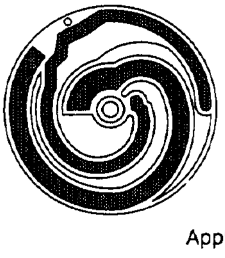
⑥. Main cam, TG2 SL arm assembly and tension coil spring (TG2 SL).


(PH-A, T, U) Main cam
Tension coil spring (TG2 SL).
TG2 SL arm assembly

2. Attaching

❶. Attach the parts in the order of ① → ⑥ → ⑤ → ④ → ③ → ②.

❷. Adjust them according to the flow chart (START-2) on page 5-43.



Cam groove on the main cam.

Apply the grease (12mm dia) to each two of cam groove (▨ part).

Main cam (rear side)

PH-A : Page 5-6
PH-F , PH-G : Page 5-7

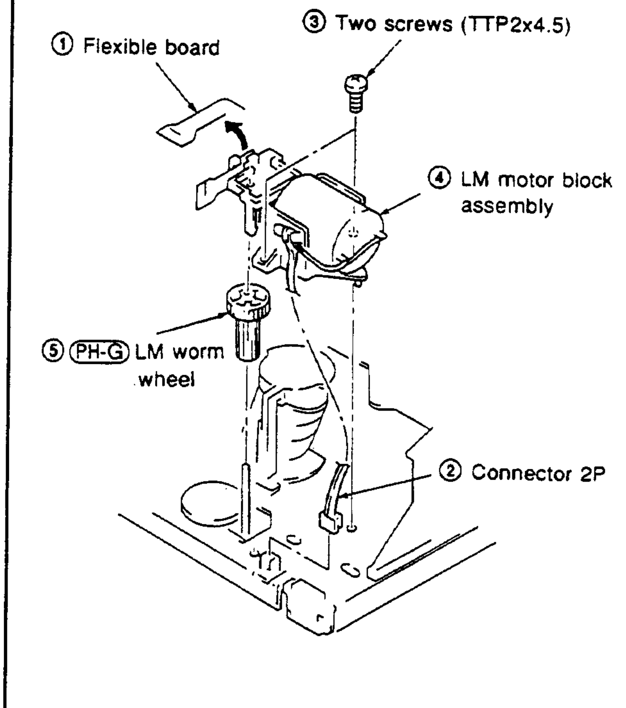
5-26. TG3/4 ARM BLOCK ASSEMBLY (TG3/4 ARM ASSEMBLY, TG3/4 LIMITER SPRING AND TG3/4 GEAR) TG3/4 BASE BLOCK ASSEMBLY (TG3/4 BASE ASSEMBLY)

1. Removing

①. Set the UNLOADING position. (Refer to page 5-3.)

②. LM motor block assembly and LM worm wheel.

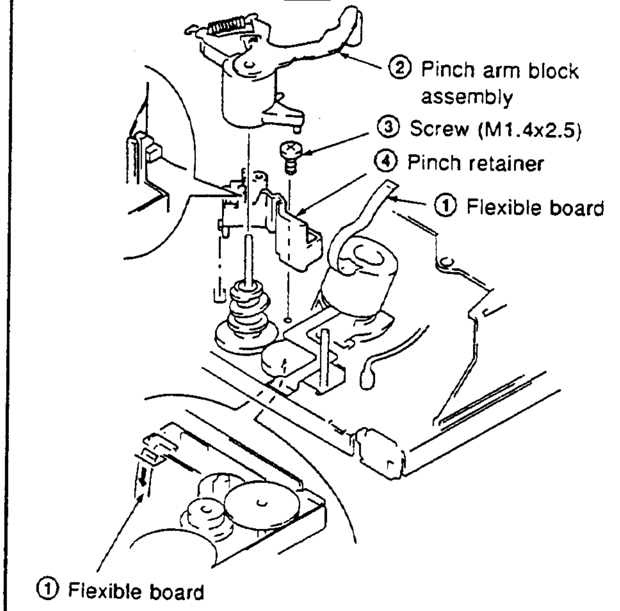
- Removing : ① → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①


③ Two screws (TTP2x4.5)
① Flexible board
④ LM motor block assembly
⑤ PH-G LM worm wheel
② Connector 2P

Fixing torque: 0.1961N•m (2.0 kg•cm)

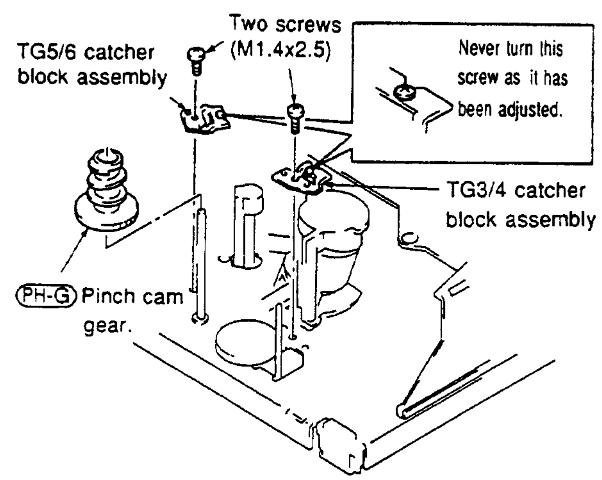
③. Pinch arm block assembly and pinch retainer.

- Removing : ① → ② → ③ → ④
- Attaching : ④ → ③ → PH-G → ② → ①


② Pinch arm block assembly
③ Screw (M1.4x2.5)
④ Pinch retainer
① Flexible board
① Flexible board

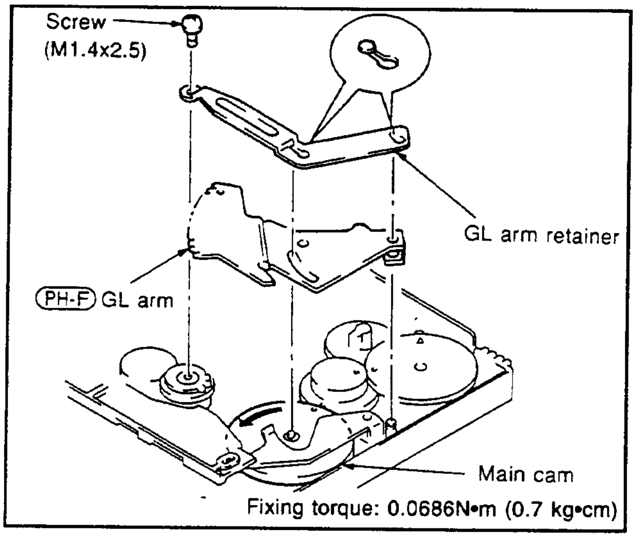
Fixing torque: 0.0686N•m (0.7 kg•cm)

④. TG3/4, TG5/6 catcher block assembly and pinch cam gear.


Two screws (M1.4x2.5)
TG5/6 catcher block assembly
Never turn this screw as it has been adjusted.
TG3/4 catcher block assembly
PH-G Pinch cam gear.

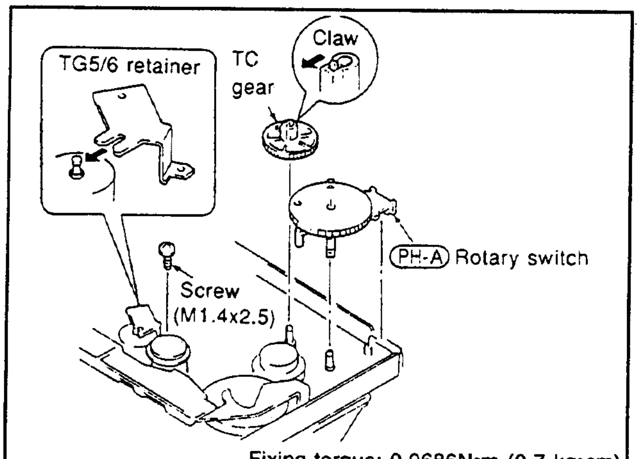
Fixing torque: 0.0686N•m (0.7 kg•cm)

⑤. GL arm retainer and GL arm.


Screw (M1.4x2.5)
GL arm retainer
PH-F GL arm
Main cam

Fixing torque: 0.0686N•m (0.7 kg•cm)

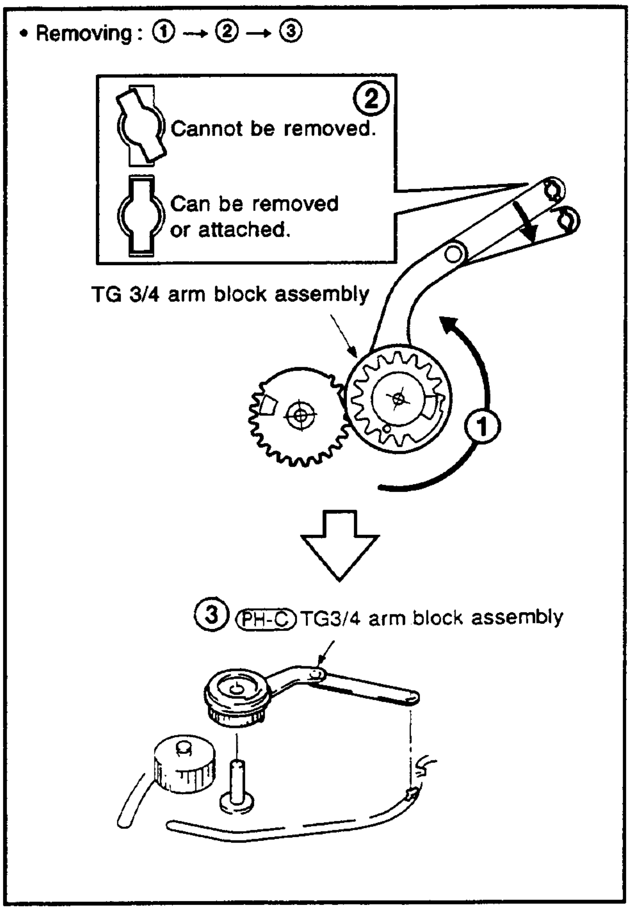
⑥. Rotary switch, TC gear and TG5/6 retainer.


TG5/6 retainer
TC gear
Claw
PH-A Rotary switch
Screw (M1.4x2.5)

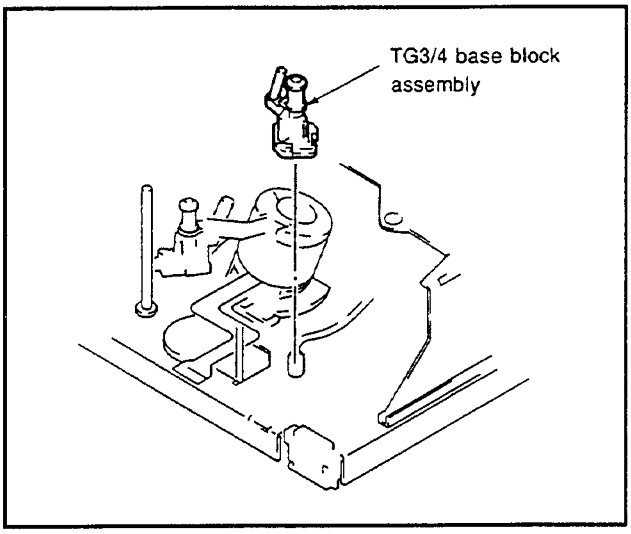
Fixing torque: 0.0686N•m (0.7 kg•cm)

⑦. Set the **LOADING** position. (Refer to page 5-3.)

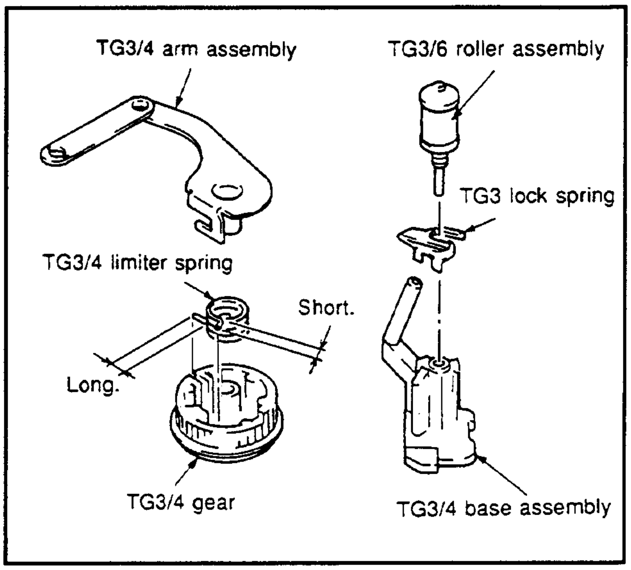
⑧. TG3/4 arm block assembly.


• Removing : ① → ② → ③
②
Cannot be removed.
Can be removed or attached.
TG 3/4 arm block assembly
①
③ PH-C TG3/4 arm block assembly

⑨. TG3/4 base block assembly.

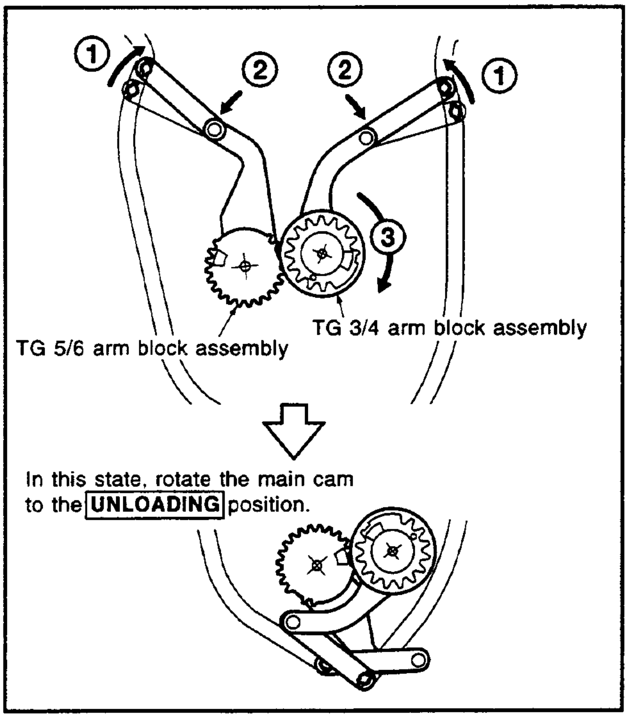

TG3/4 base block assembly

⑩. TG3/4 arm assembly, TG3/4 limiter spring, TG3/4 gear, TG3/6 roller assembly, TG3 lock spring and TG3/4 base assembly.


TG3/4 arm assembly
TG3/6 roller assembly
TG3 lock spring
TG3/4 limiter spring
Short.
Long.
TG3/4 gear
TG3/4 base assembly

2. Attaching

❶. Set the **LOADING** position. (Refer to page 5-3.)
❷. TG3/4 arm assembly, TG3/4 limiter spring, TG3/4 gear, TG3/6 roller assembly, TG3 lock spring and TG3/4 base assembly.
❸. TG3/4 base block assembly.
❹. TG3/4 arm block assembly.


①
②
②
①
③
TG 3/4 arm block assembly
TG 5/6 arm block assembly
In this state, rotate the main cam to the UNLOADING position.

❺. Attach the parts in the order of ⑥ → ⑤ → ④ → ③ → ②.
❻. Adjust them according to the flow chart (START-3) on page 5-43.

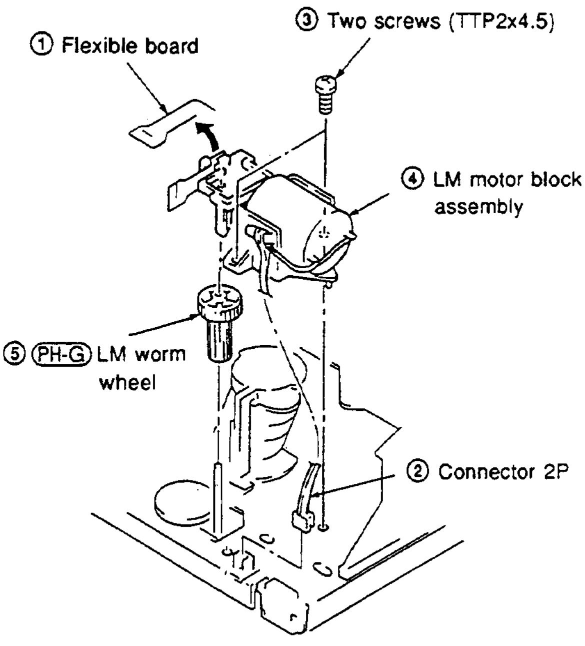
5-27. TG5/6 ARM BLOCK ASSEMBLY (TG5/6 ARM ASSEMBLY, TG5/6 LIMITER SPRING AND TG5/6 GEAR) TG5/6 BASE BLOCK ASSEMBLY (TG5/6 BASE ASSEMBLY)

1. Removing

①. Set the UNLOADING position. (Refer to page 5-3.)

②. LM motor block assembly and LM worm wheel.

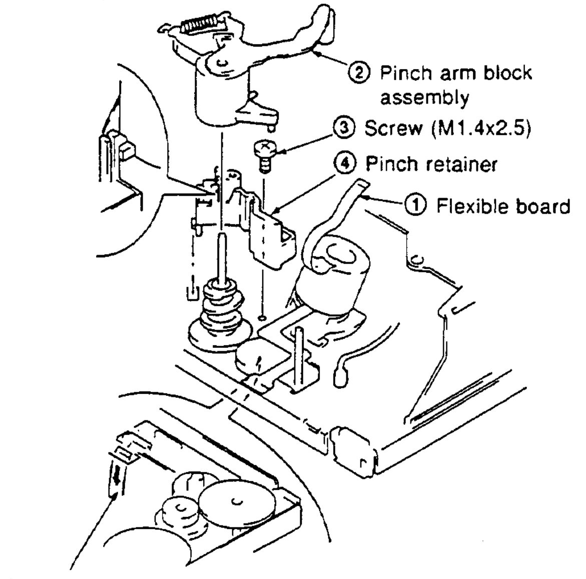
- Removing : ① → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①


③ Two screws (TTP2x4.5)
① Flexible board
④ LM motor block assembly
⑤ PH-G LM worm wheel
② Connector 2P

Fixing torque: 0.1961N•m (2.0 kg•cm)

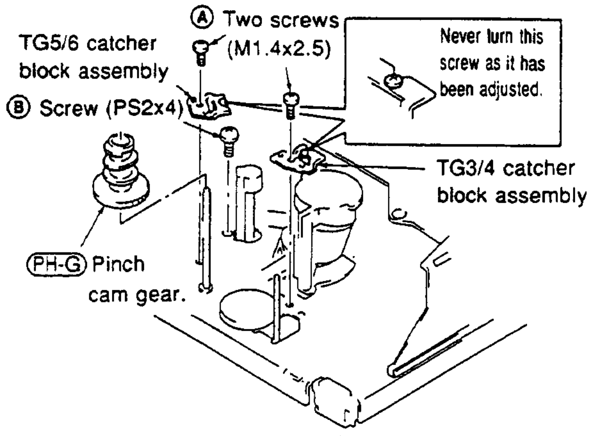
③. Pinch arm block assembly and pinch retainer.

- Removing : ① → ② → ③ → ④
- Attaching : ④ → ③ → PH-G → ② → ①


② Pinch arm block assembly
③ Screw (M1.4x2.5)
④ Pinch retainer
① Flexible board
① Flexible board

Fixing torque: 0.0686N•m (0.7 kg•cm)

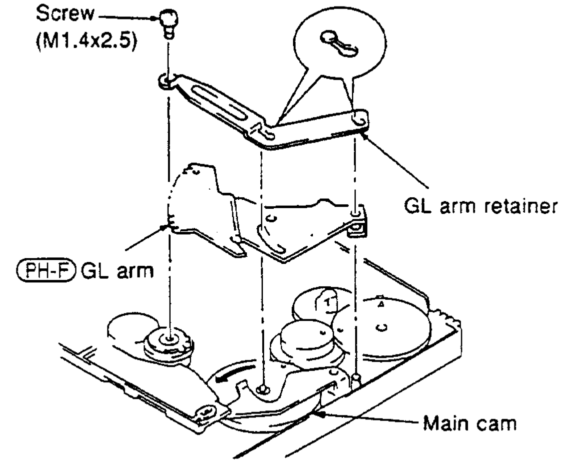
④. TG3/4, TG5/6 catcher block assembly, screw of capstan motor and pinch cam gear.


Ⓐ Two screws (M1.4x2.5)
TG5/6 catcher block assembly
Ⓑ Screw (PS2x4)
TG3/4 catcher block assembly
PH-G Pinch cam gear.

Never turn this screw as it has been adjusted.

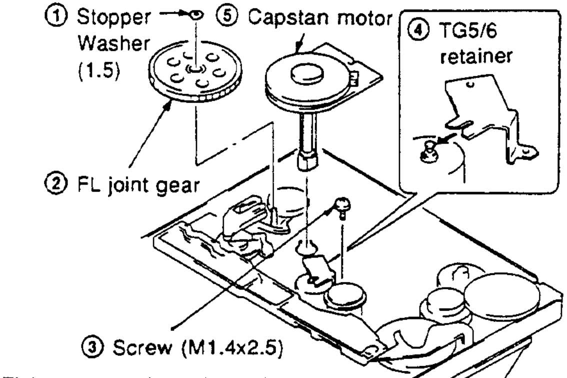
Fixing torque Ⓐ: 0.0686N•m (0.7 kg•cm)
Ⓑ: 0.1961N•m (2.0 kg•cm)

⑤. GL arm retainer and GL arm.


Screw (M1.4x2.5)
GL arm retainer
PH-F GL arm
Main cam

Fixing torque: 0.0686N•m (0.7 kg•cm)

⑥. FL joint gear, capstan motor and TG5/6 retainer.

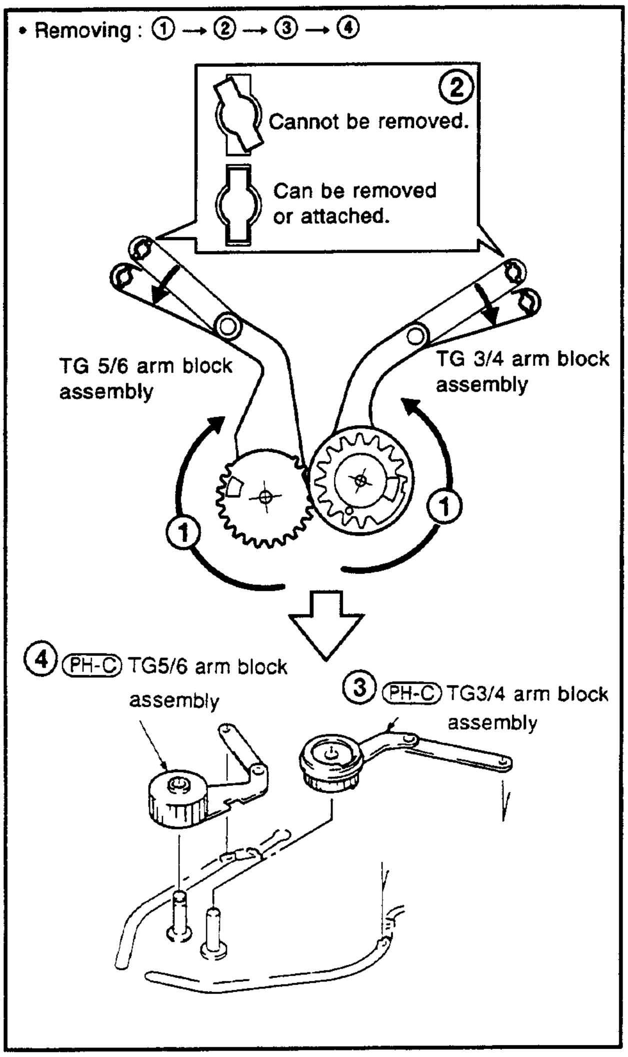

① Stopper Washer (1.5)
⑤ Capstan motor
④ TG5/6 retainer
② FL joint gear
③ Screw (M1.4x2.5)

Fixing torque: 0.0686N•m (0.7 kg•cm)

- Removing : ① → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①

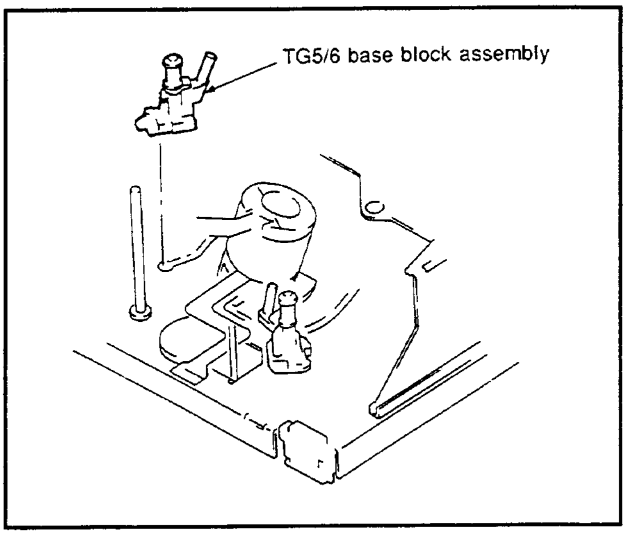
⑦. Set the LOADING position. (Refer to page 5-3.)

⑧. TG3/4 arm block assembly and TG5/6 arm block assembly.

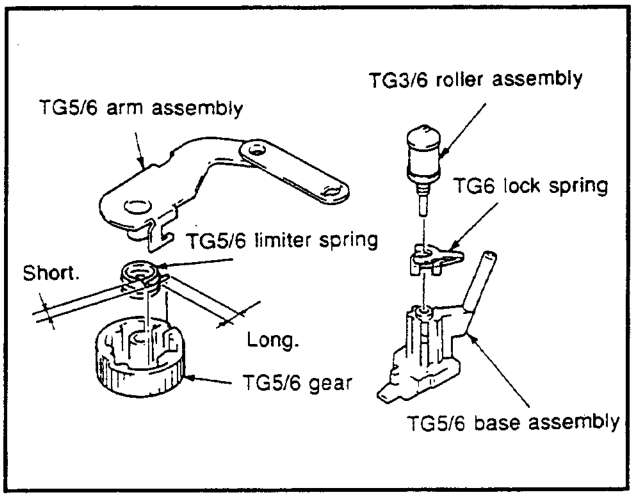

• Removing : ① → ② → ③ → ④

②
Cannot be removed.
Can be removed or attached.
TG 5/6 arm block assembly
TG 3/4 arm block assembly
①
①
④ PH-C TG5/6 arm block assembly
③ PH-C TG3/4 arm block assembly

⑨. TG5/6 base block assembly.


TG5/6 base block assembly

⑩. TG5/6 arm assembly, TG5/6 limiter spring, TG5/6 gear, TG3/6 roller assembly, TG6 lock spring and TG5/6 base assembly.


TG3/6 roller assembly
TG5/6 arm assembly
TG6 lock spring
TG5/6 limiter spring
Short.
Long.
TG5/6 gear
TG5/6 base assembly

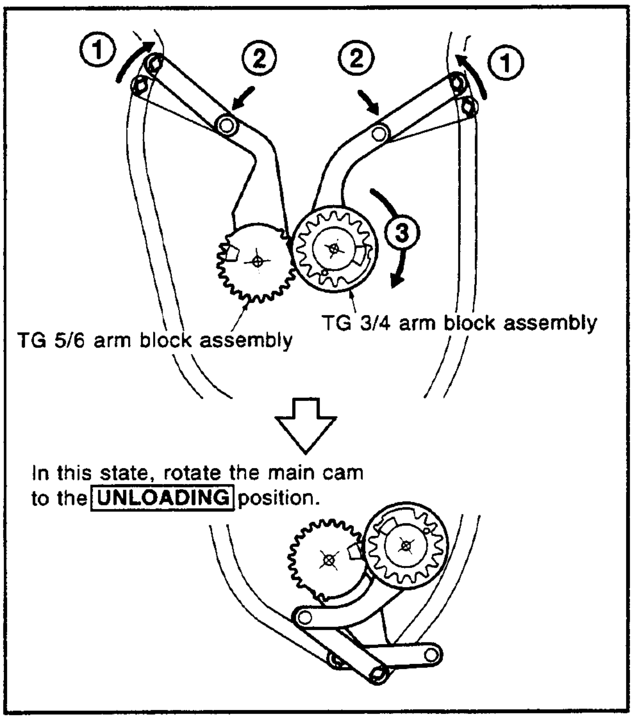
2. Attaching

❶. Set the LOADING position. (Refer to page 5-3.)

❷. TG5/6 arm assembly, TG5/6 limiter spring, TG5/6 gear, TG3/6 roller assembly, TG6 lock spring and TG5/6 base assembly.

❸. TG5/6 base block assembly.

❹. TG3/4 arm block assembly and TG5/6 arm block assembly.


①
②
②
①
③
TG 5/6 arm block assembly
TG 3/4 arm block assembly

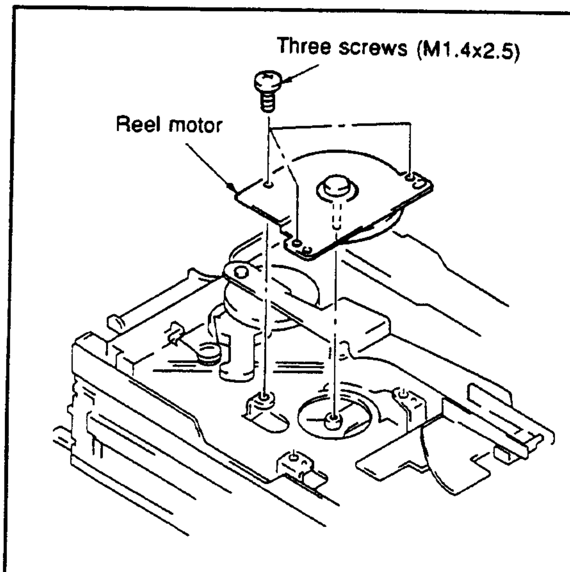
In this state, rotate the main cam to the UNLOADING position.

❺ Attach the parts in the order of ⑥ → ⑤ → ④ → ③ → ②.

❻ Adjust them according to the flow chart (START-3) on page 5-43.

5-28. REEL MOTOR

• Removing/Attaching


Three screws (M1.4x2.5)
Reel motor

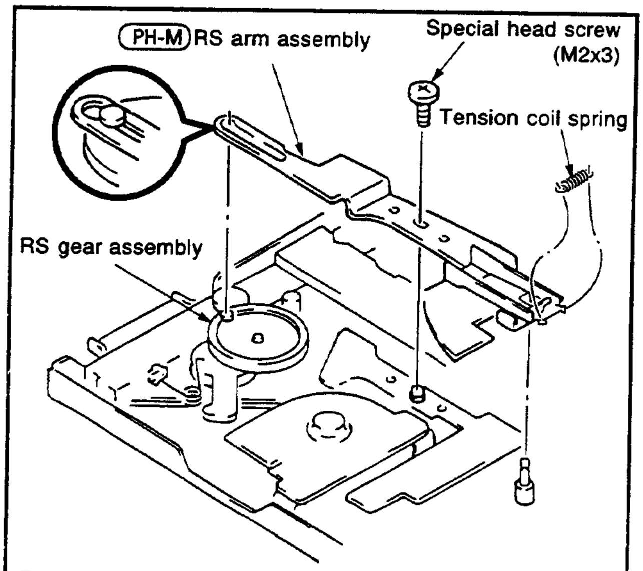
Fixing torque: 0.0686N•m (0.7 kg•cm)

5-29. RS ARM ASSEMBLY

1. Removing

①. Set the (S/L cassette) position. (Refer to page 5-2.)

②. RS arm assembly.


PH-M RS arm assembly
Special head screw (M2x3)
Tension coil spring
RS gear assembly

Fixing torque: 0.1961N•m (2.0 kg•cm)

2. Attaching

- Attach the parts in the order of ① → ②.

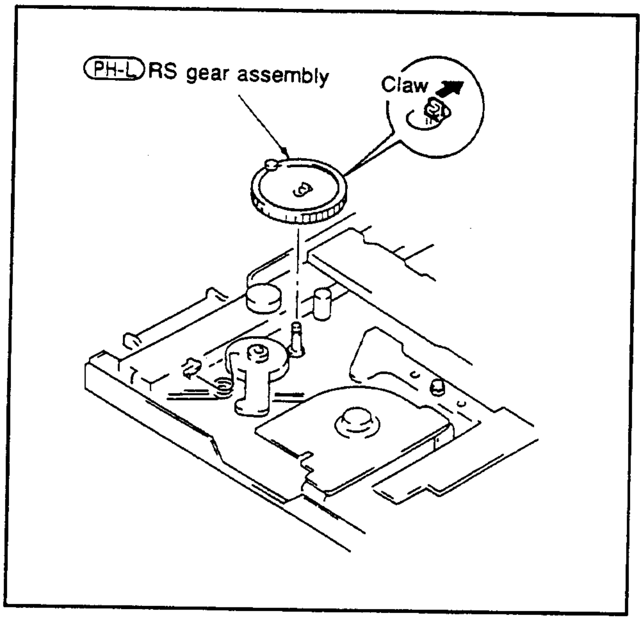
5-30. RS GEAR ASSEMBLY, MIC PRESS SPRING AND MIC LEVER

1. Removing

①. Set the (S/L cassette) position. (Refer to page 5-2.)

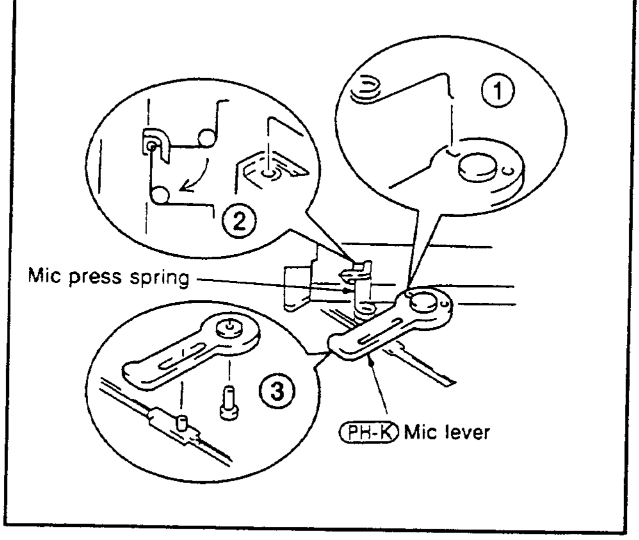
②. RS arm assembly. (Refer to 5-29.)

③. RS gear assembly.


PH-L RS gear assembly
Claw

④. Mic press spring and Mic lever.

- Removing : ① → ② → ③
- Attaching : ③ → ② → ①


①
②
Mic press spring
③
PH-K Mic lever

2. Attaching

- Attach the parts in the order of ① → ④ → ③ → ②.

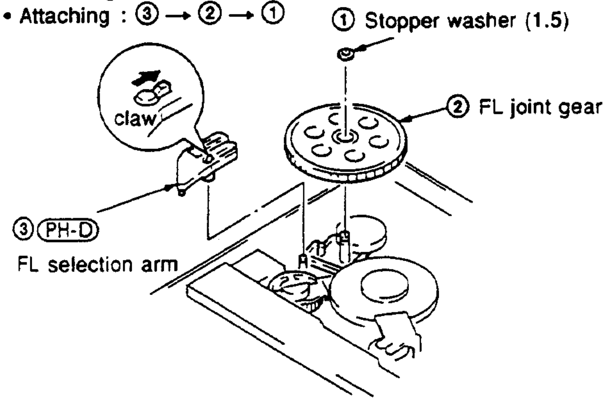
(PH-D) : Page 5-7
(PH-J) : Page 5-8
(PH-K) : Page 5-9

5-31. RACK JOINT GEAR, RACK HOLDER, MIC HOLDER, RACK (LC) AND RACK (SC)

1. Removing

①. FL joint gear, TG7 selection arm.

- Removing : ① → ② → ③
- Attaching : ③ → ② → ①

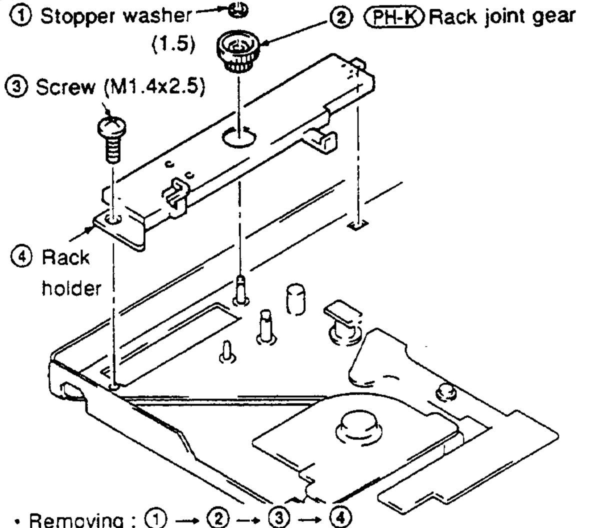

① Stopper washer (1.5)
claw
② FL joint gear
③ (PH-D)
FL selection arm

②. Set the **(S/L cassette)** position. (Refer to page 5-2.)

③. RS arm assembly. (Refer to 5-29.)

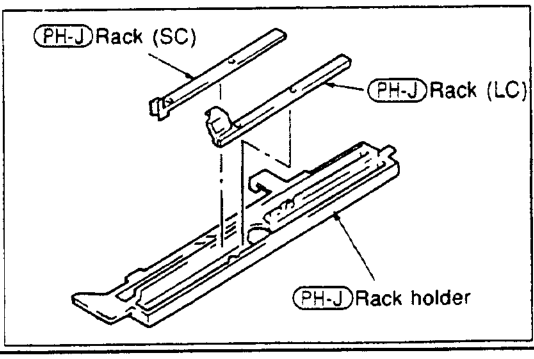
④. RS gear assembly, Mic press spring and Mic lever. (Refer to 5-30.)

⑤. Rack joint gear, rack holder, rack (LC) and rack (SC).


① Stopper washer (1.5)
② (PH-K) Rack joint gear
③ Screw (M1.4x2.5)
④ Rack holder

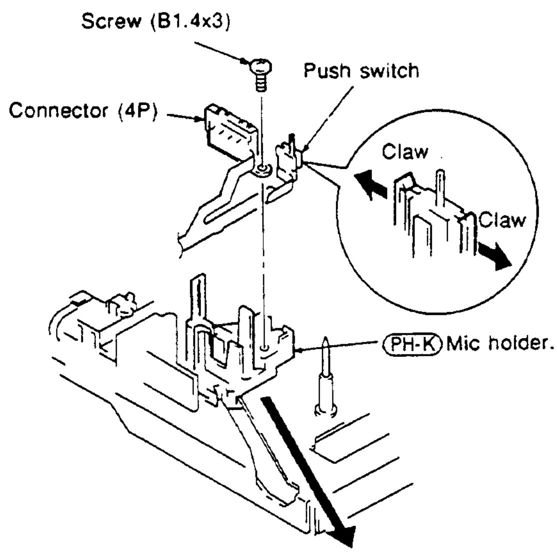
- Removing : ① → ② → ③ → ④
- Attaching : ④ → ③ → ② → ①

Fixing torque: 0.0686N•m (0.7 kg•cm)


(PH-J) Rack (SC)
(PH-J) Rack (LC)
(PH-J) Rack holder

⑥. FL block assembly. (Refer to page 5-2.)

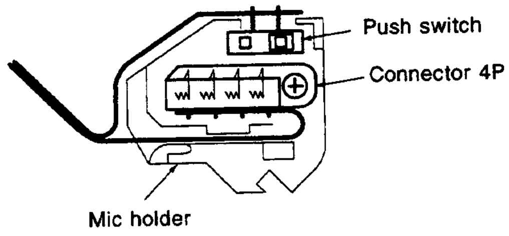
⑦. Push switch, Connector (4P), Mic holder.


Screw (B1.4x3)
Push switch
Connector (4P)
Claw
Claw
(PH-K) Mic holder.

Fixing torque: 0.0392N•m (0.4 Kg•cm)

Note for Installation

Running the flexible board.


Push switch
Connector 4P
Mic holder

2. Attaching

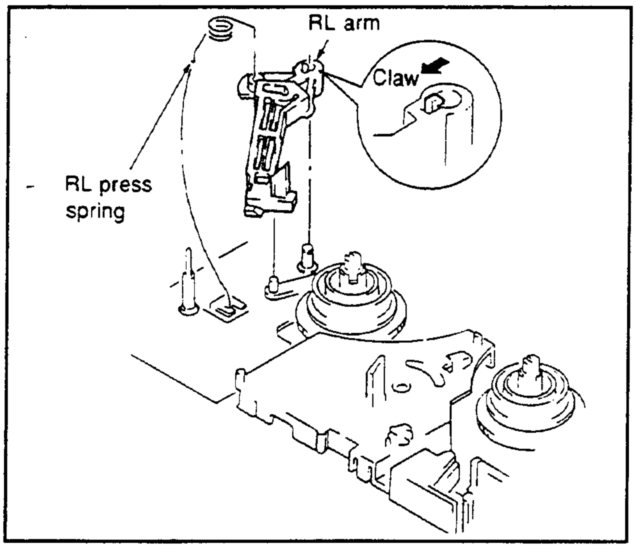
- Attach the parts in the order of ② → ⑦ → ⑥ → ⑤ → ④ → ③ → ①.

5-32. PLATE LINK ASSEMBLY

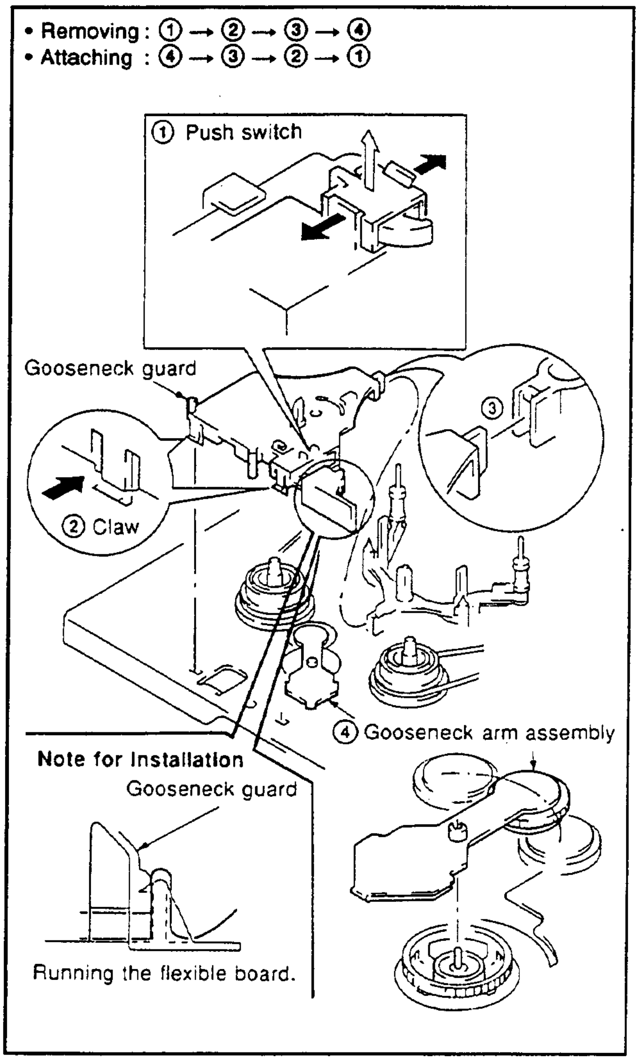
1. Removing

①. Set the **(L cassette)** position. (Refer to page 5-2.)

②. RL arm.


RL arm
Claw
RL press spring

③. Gooseneck guard.



- Removing : ① → ② → ③ → ④
- Attaching : ④ → ③ → ② → ①

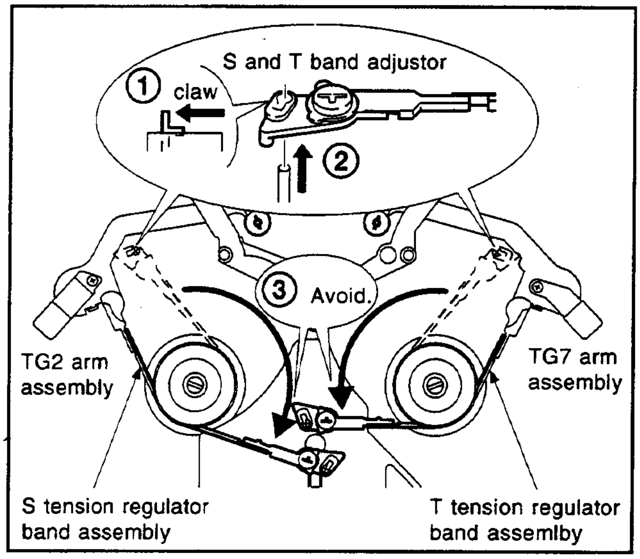
① Push switch
Gooseneck guard
③
② Claw
④ Gooseneck arm assembly

Note for Installation

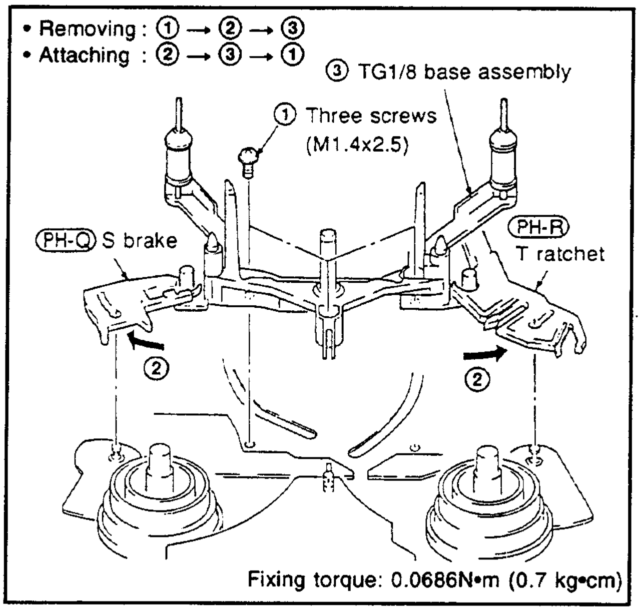
Gooseneck guard

Running the flexible board.

④. S and T band adjustor.


S and T band adjustor
① claw
②
③ Avoid.
TG2 arm assembly
TG7 arm assembly
S tension regulator band assembly
T tension regulator band assemlby

⑤. TG1/8 base assembly. (S brake and T ratchet.)

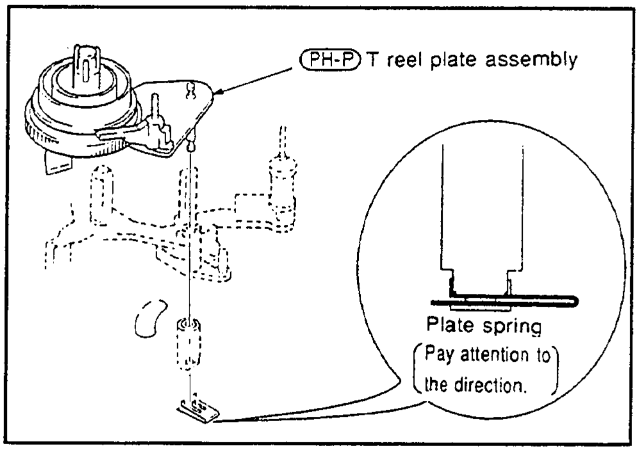


- Removing : ① → ② → ③
- Attaching : ② → ③ → ①

③ TG1/8 base assembly
① Three screws (M1.4x2.5)
(PH-Q) S brake
(PH-R) T ratchet
②
②

Fixing torque: 0.0686N•m (0.7 kg•cm)

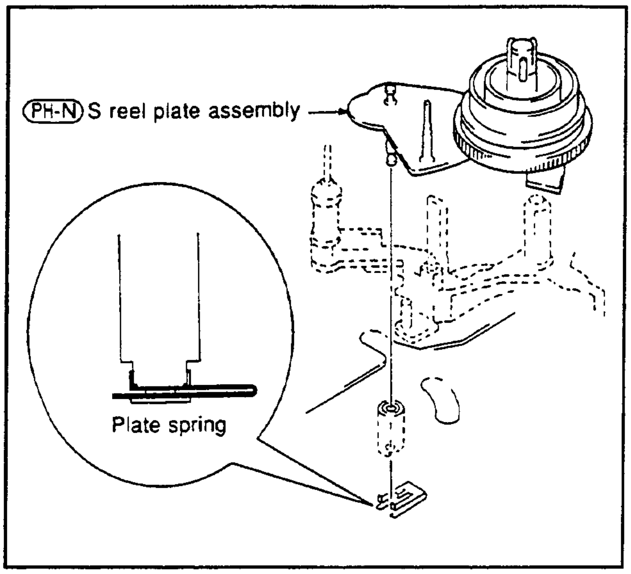
⑥ T reel plate assembly.


(PH-P) T reel plate assembly
Plate spring

(Pay attention to the direction.)

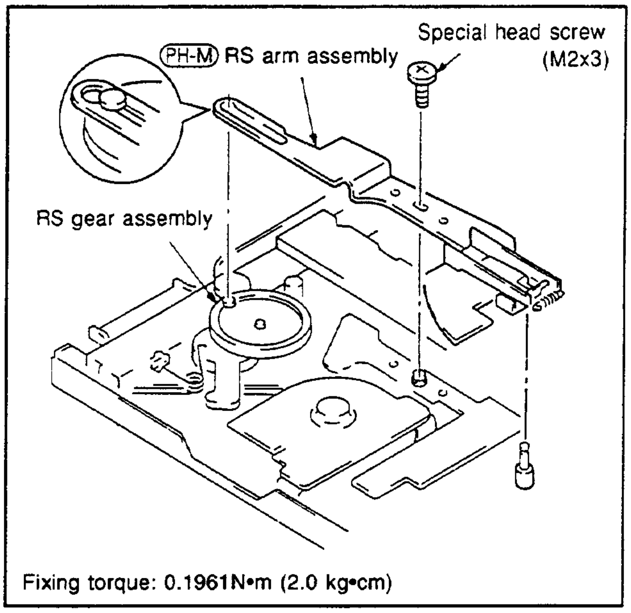
PH-H : Page 5-8
PH-M : Page 5-9
PH-N : Page 5-10

⑦. S reel plate assembly.


PH-N S reel plate assembly
Plate spring

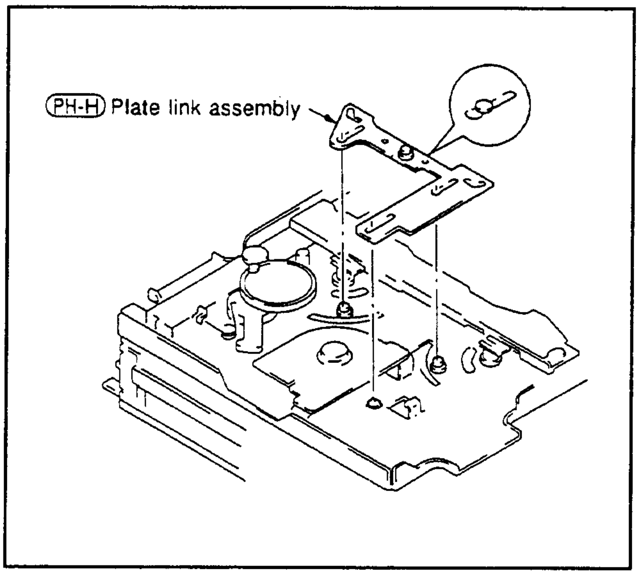
⑧. Set the **S/L cassette** position. (Refer to page 5-2.)

⑨. RS arm assembly.


Special head screw
PH-M RS arm assembly
(M2x3)
RS gear assembly

Fixing torque: 0.1961N•m (2.0 kg•cm)

⑩. Plate link assembly.


PH-H Plate link assembly

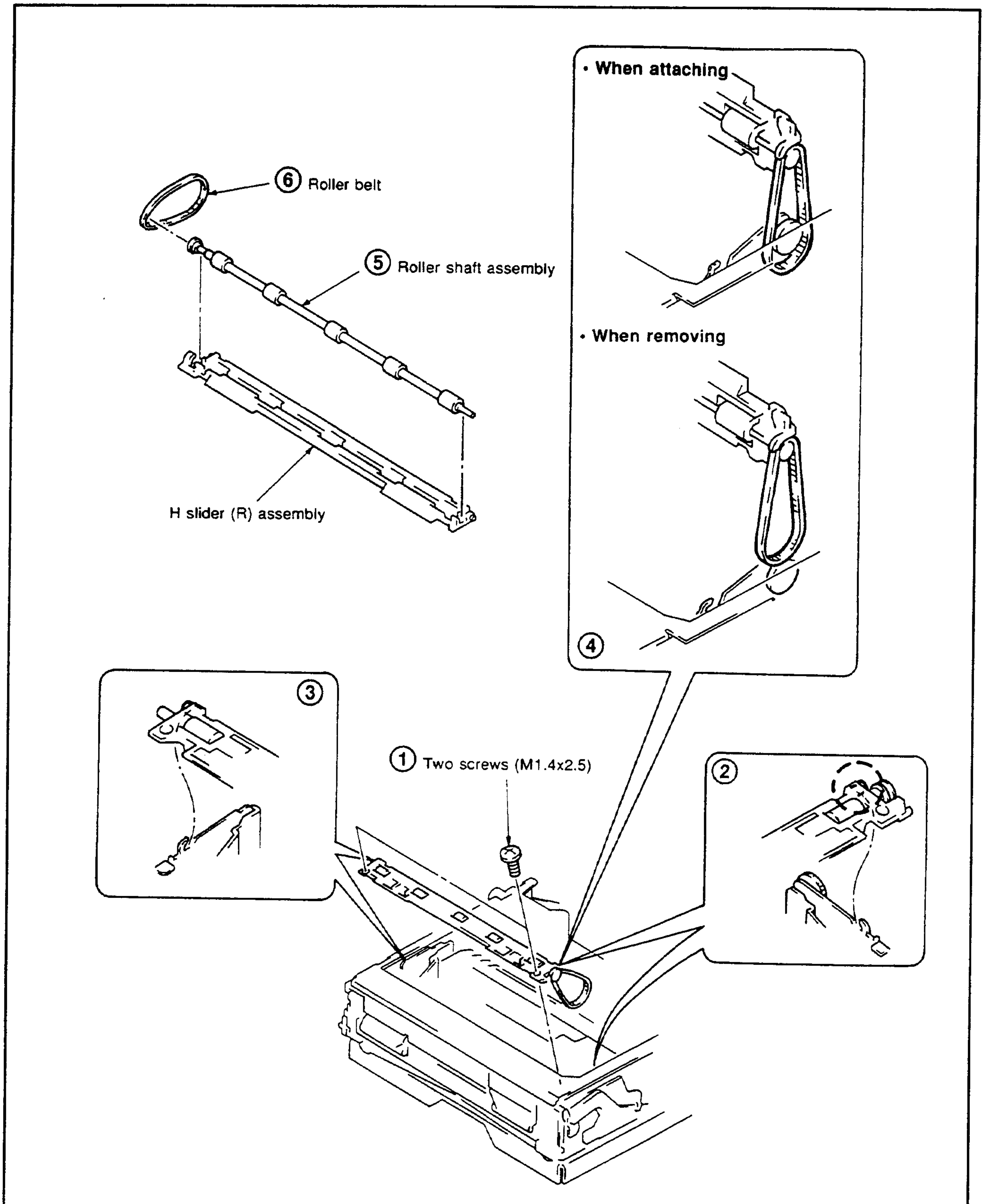
2. Attaching

❶. Attach the parts in the order of ⑧ → ⑩ → ⑨ → ⑦ → ⑥ → ⑤ → ① → ④ → ③ → ②.

❷. Adjust them according to the flow chart (START-1) on page 5-43.

5-33. ROLLER SHAFT ASSEMBLY AND ROLLER BELT

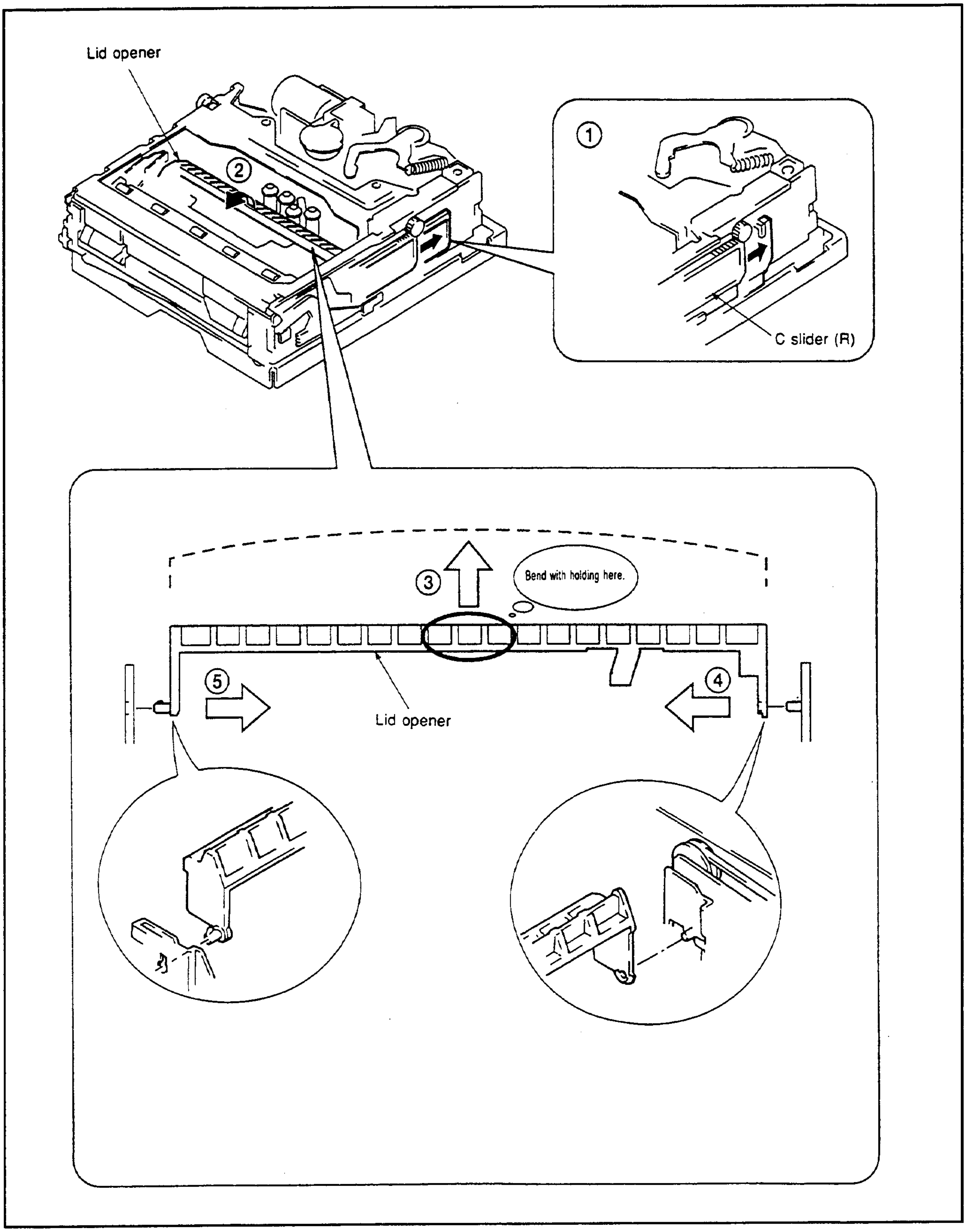
• Removing/Attaching


• When attaching
⑥ Roller belt
⑤ Roller shaft assembly
• When removing
H slider (R) assembly
④
③
① Two screws (M1.4x2.5)
②

Fixing torque: 0.0981N•m (1.0 kg•cm)

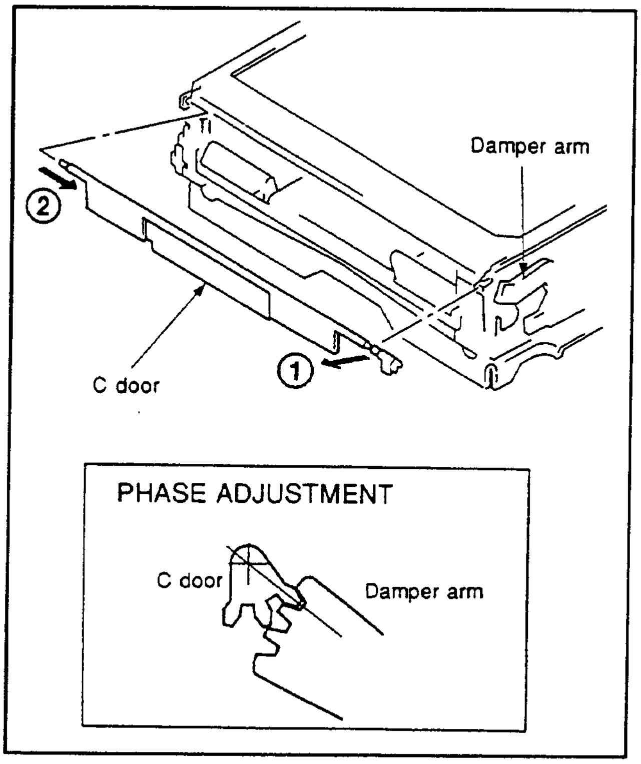
5-34. LID OPENER

• Removing/Attaching


Lid opener
②
①
C slider (R)
③
Bend with holding here.
⑤
④
Lid opener

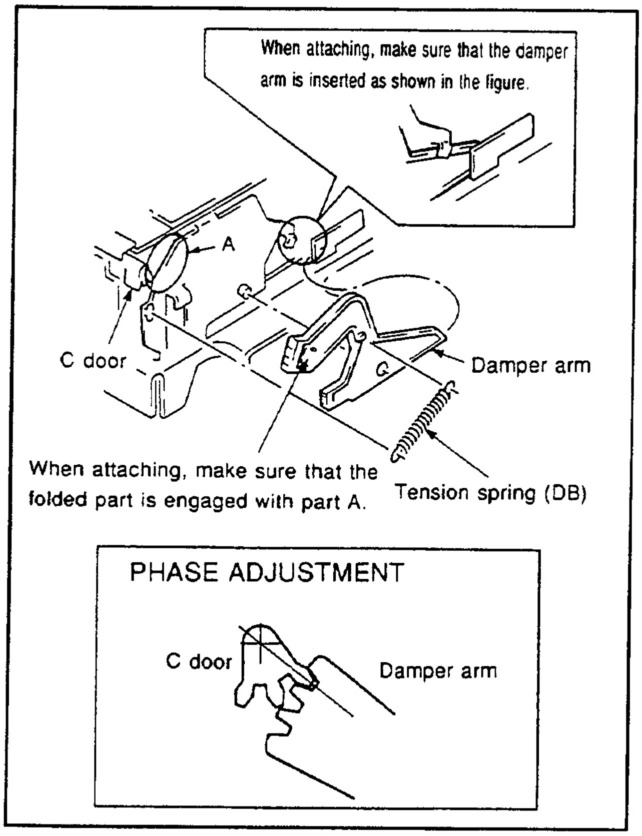
5-35. C DOOR

- **Removing/Attaching**


②
Damper arm
C door
①
PHASE ADJUSTMENT
C door
Damper arm

5-36. DAMPER ARM AND TENSION SPRING (DB)

- **Removing/Attaching**


When attaching, make sure that the damper arm is inserted as shown in the figure.

When attaching, make sure that the folded part is engaged with part A.

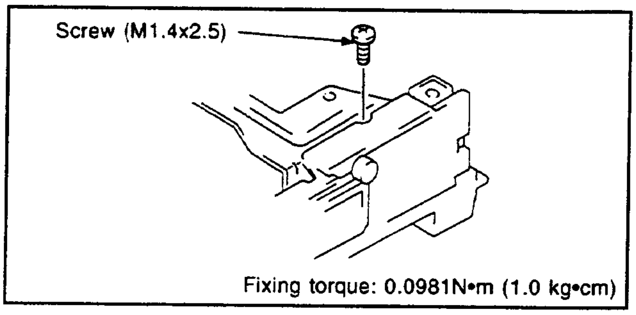
A
C door
Damper arm
Tension spring (DB)
PHASE ADJUSTMENT
C door
Damper arm

5-37. GEAR (A), GEAR (B) AND C WORM

1. Removing

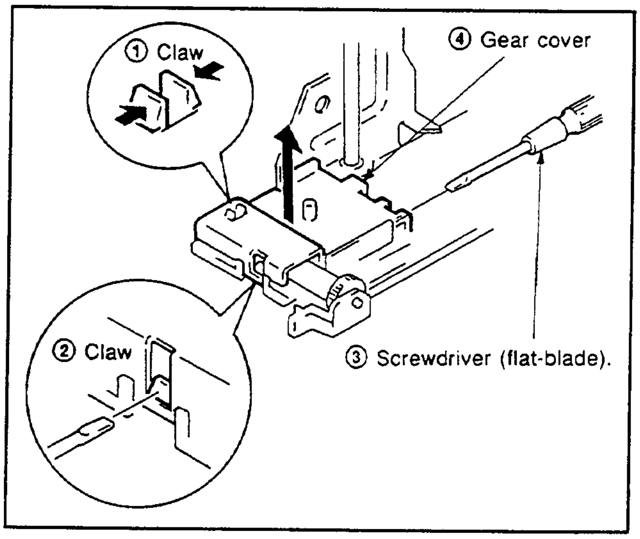
①. FL block assembly. (Refer to page 5-2.)

②. Screw (M1.4x2.5).

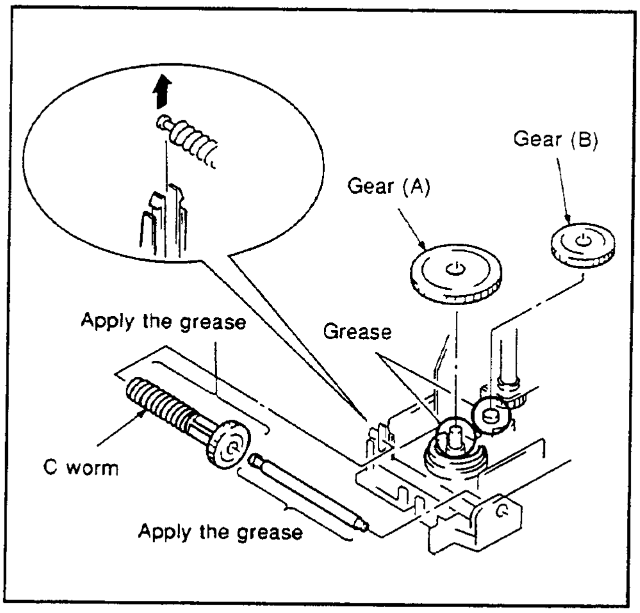

Screw (M1.4x2.5)

Fixing torque: 0.0981N•m (1.0 kg•cm)

③. Gear cover.


① Claw
④ Gear cover
② Claw
③ Screwdriver (flat-blade).

④. Gear (A), Gear (B) and C worm.

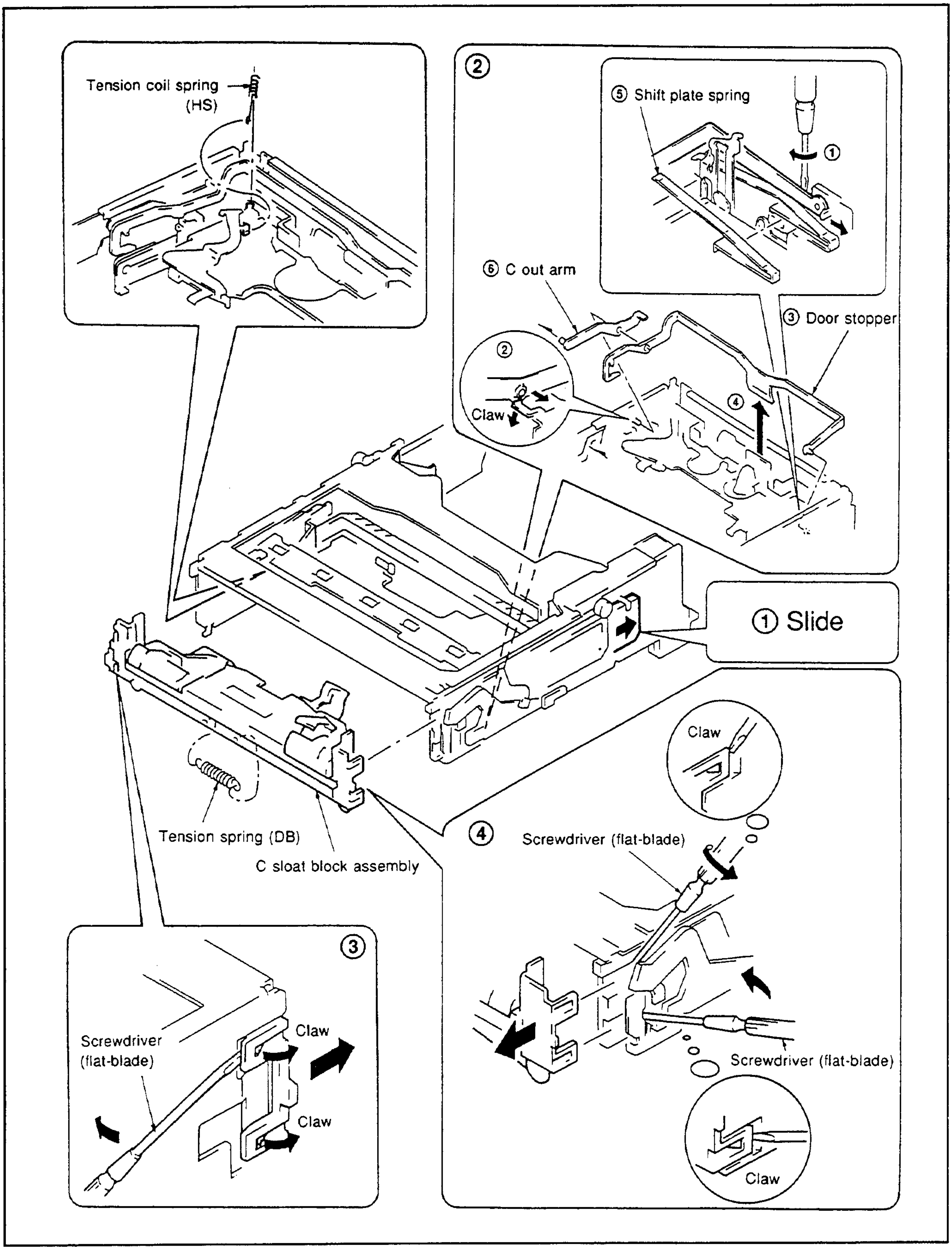

Gear (B)
Gear (A)
Apply the grease
Grease
C worm
Apply the grease

2. Attaching

- Attach the parts in the order of ④ → ③ → ② → ①.

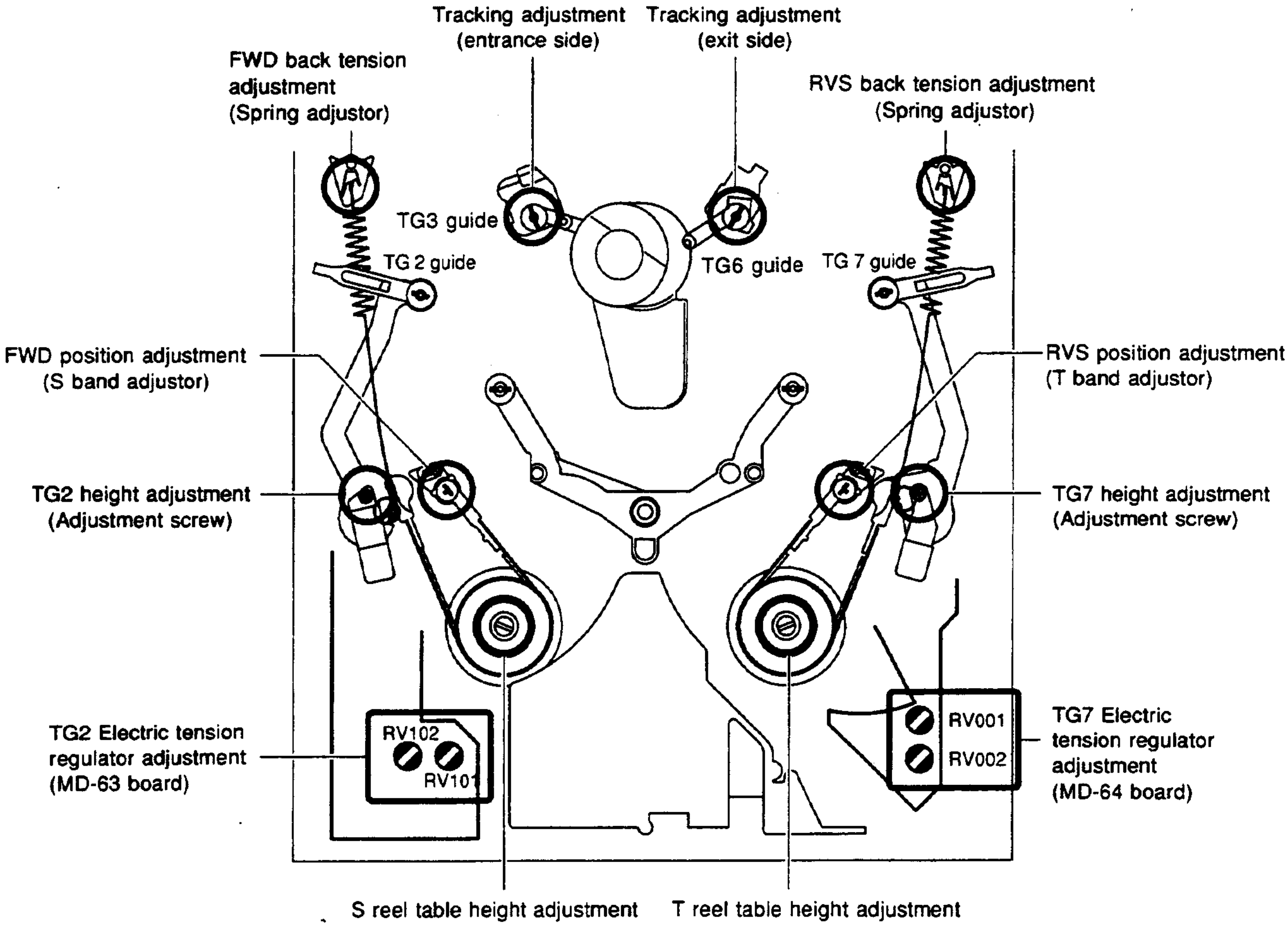
5-38. TENSION COIL SPRING (HS), TENSION SPRING (DB), SHIFT PLATE SPRING AND C SLOAT BLOCK ASSEMBLY

- **Removing/Attaching** (Remove the FL block assembly (Refer to page 5-2)).


Tension coil spring (HS)
②
⑤ Shift plate spring
①
⑥ C out arm
③ Door stopper
②
Claw
④
① Slide
Claw
Tension spring (DB)
C sloat block assembly
④
Screwdriver (flat-blade)
③
Screwdriver (flat-blade)
Claw
Claw
Screwdriver (flat-blade)
Claw

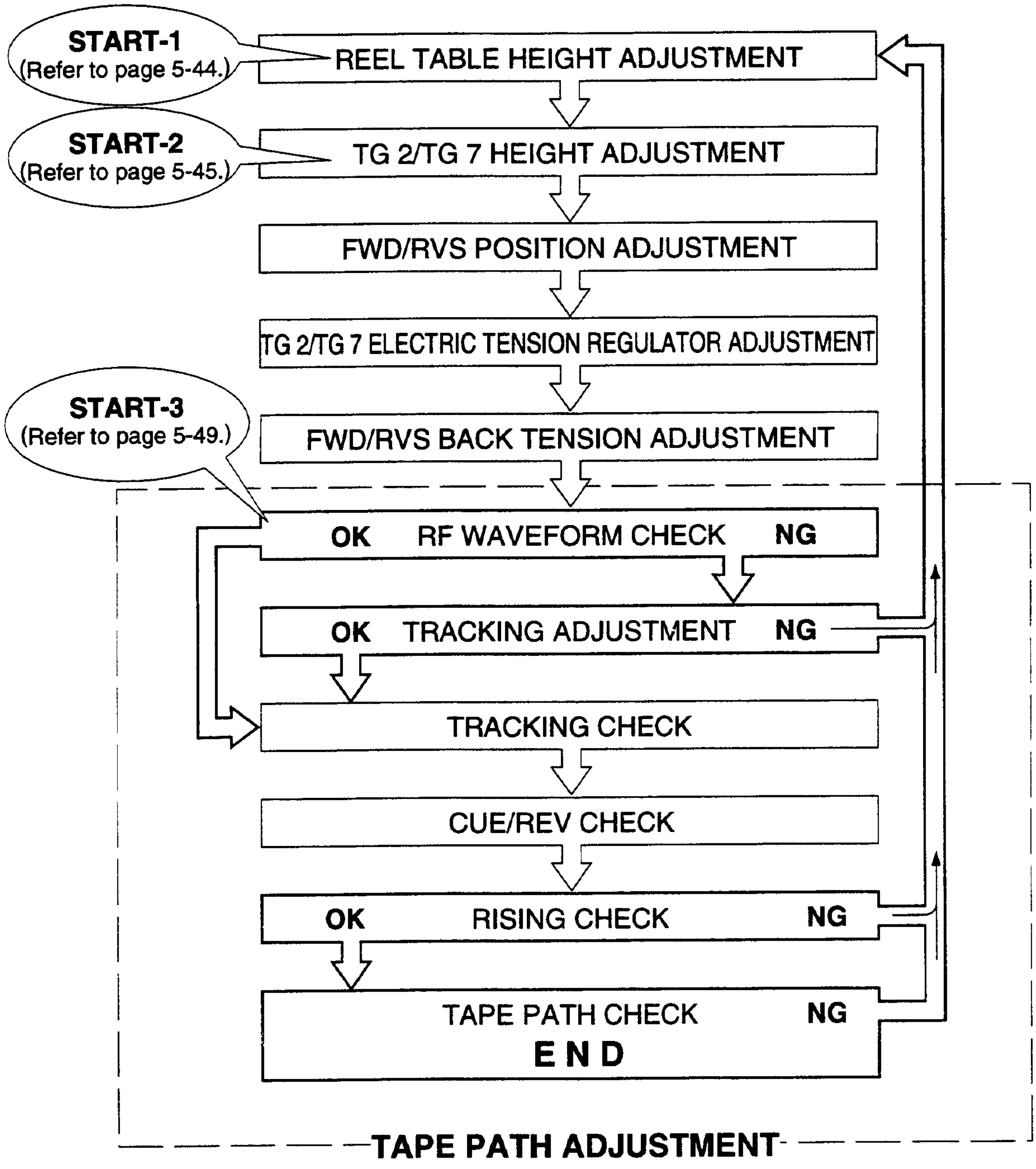
5-1-6. ADJUSTMENTS AND CHECKS

6-1. ADJUSTMENT POSITION



Tracking adjustment (entrance side)
Tracking adjustment (exit side)
FWD back tension adjustment (Spring adjustor)
RVS back tension adjustment (Spring adjustor)
TG3 guide
TG 2 guide
TG6 guide
TG 7 guide
FWD position adjustment (S band adjustor)
RVS position adjustment (T band adjustor)
TG2 height adjustment (Adjustment screw)
TG7 height adjustment (Adjustment screw)
TG2 Electric tension regulator adjustment (MD-63 board)
RV102
RV101
RV001
RV002
TG7 Electric tension regulator adjustment (MD-64 board)
S reel table height adjustment
T reel table height adjustment

6-2. ADJUSTMENT ORDER


START-1
(Refer to page 5-44.)
REEL TABLE HEIGHT ADJUSTMENT
START-2
(Refer to page 5-45.)
TG 2/TG 7 HEIGHT ADJUSTMENT
FWD/RVS POSITION ADJUSTMENT
TG 2/TG 7 ELECTRIC TENSION REGULATOR ADJUSTMENT
START-3
(Refer to page 5-49.)
FWD/RVS BACK TENSION ADJUSTMENT
OK
RF WAVEFORM CHECK
NG
OK
TRACKING ADJUSTMENT
NG
TRACKING CHECK
CUE/REV CHECK
OK
RISING CHECK
NG
TAPE PATH CHECK
NG
END
TAPE PATH ADJUSTMENT

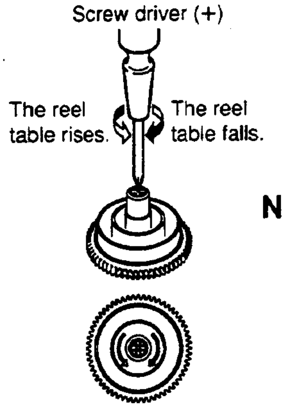
6-3. ADJUSTMENT AND CHECKING METHOD

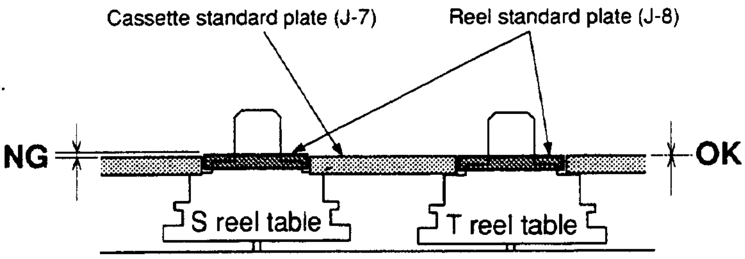
6-3-1. REEL TABLE HEIGHT ADJUSTMENT

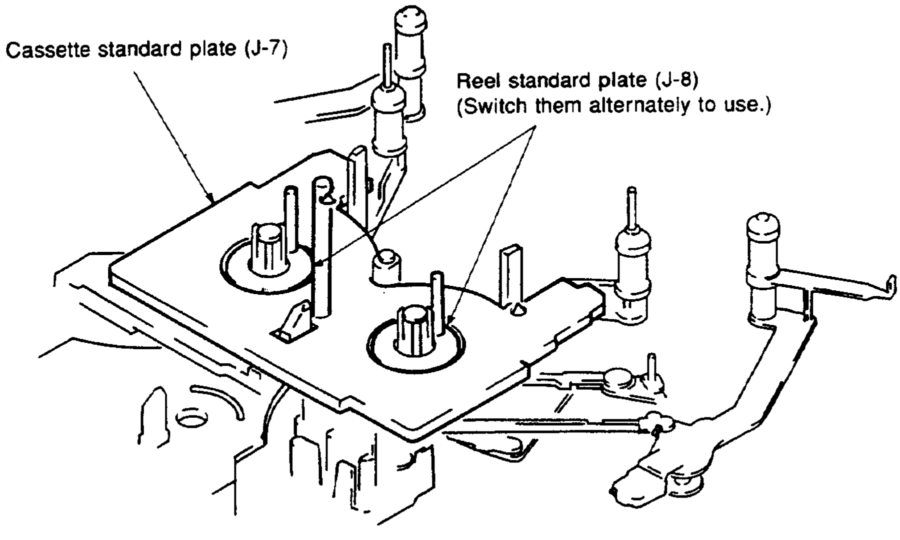
1. Preparation before adjustment

FL block : Remove.
Position : LOADING / S cassette
Jig used : Cassette standard plate (J-7), Reel standard plate (J-8) and screwdriver (+)

2. Adjusting


Screw driver (+)
The reel table rises.
The reel table falls.


Cassette standard plate (J-7)
Reel standard plate (J-8)
NG
OK
S reel table
T reel table

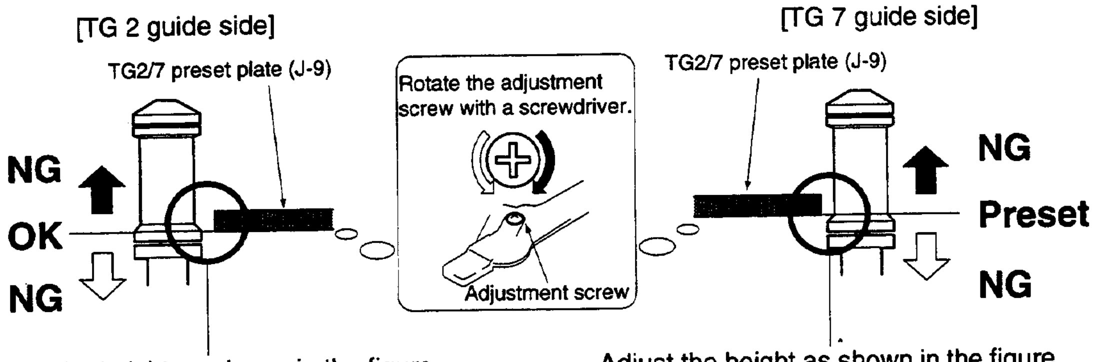

Cassette standard plate (J-7)
Reel standard plate (J-8)
(Switch them alternately to use.)

6-3-2. TG2/TG7 HEIGHT ADJUSTMENT

1. Preparation before adjustment

FL block : Remove.
Position : LOADING / S cassette
Jig used : Cassette standard plate (J-7), TG2/7 preset plate (J-9) and screwdriver
(For attaching jigs, refer to page 5-5.)

2. Adjusting


[TG 2 guide side]
TG2/7 preset plate (J-9)
NG
OK
NG
Rotate the adjustment screw with a screwdriver.
Adjustment screw
[TG 7 guide side]
TG2/7 preset plate (J-9)
NG
Preset
NG

Adjust the height as shown in the figure.

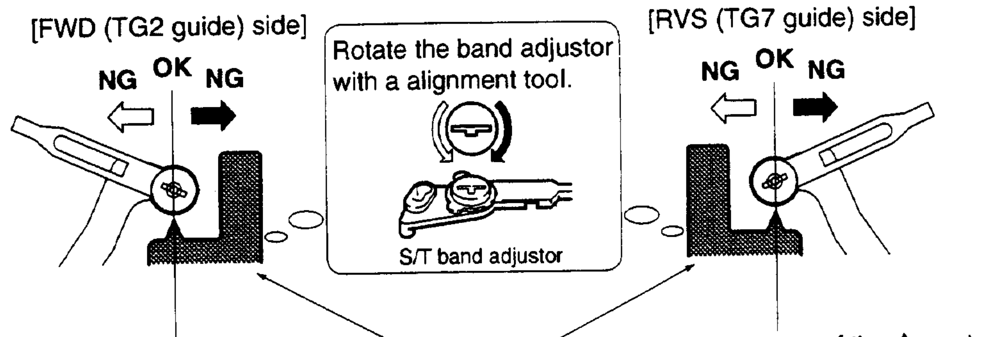
Adjust the height as shown in the figure.
(This figure means preset.
Final adjustment ➡ 5-53③.)

6-3-3. FWD/RVS POSITION ADJUSTMENT

1. Preparation before adjustment

FL block : Remove.
Position : LOADING (The pinch roller should be stuck.) / S cassette
Jig used : Cassette standard plate (J-7), TG2/7 preset plate (J-9) and screwdriver for tape path

2. Adjusting


[FWD (TG2 guide) side]
NG
OK
NG
Rotate the band adjustor with a alignment tool.
S/T band adjustor
[RVS (TG7 guide) side]
NG
OK
NG

Align it with the center of the ▲ part.

Align it with the center of the ▲ part.

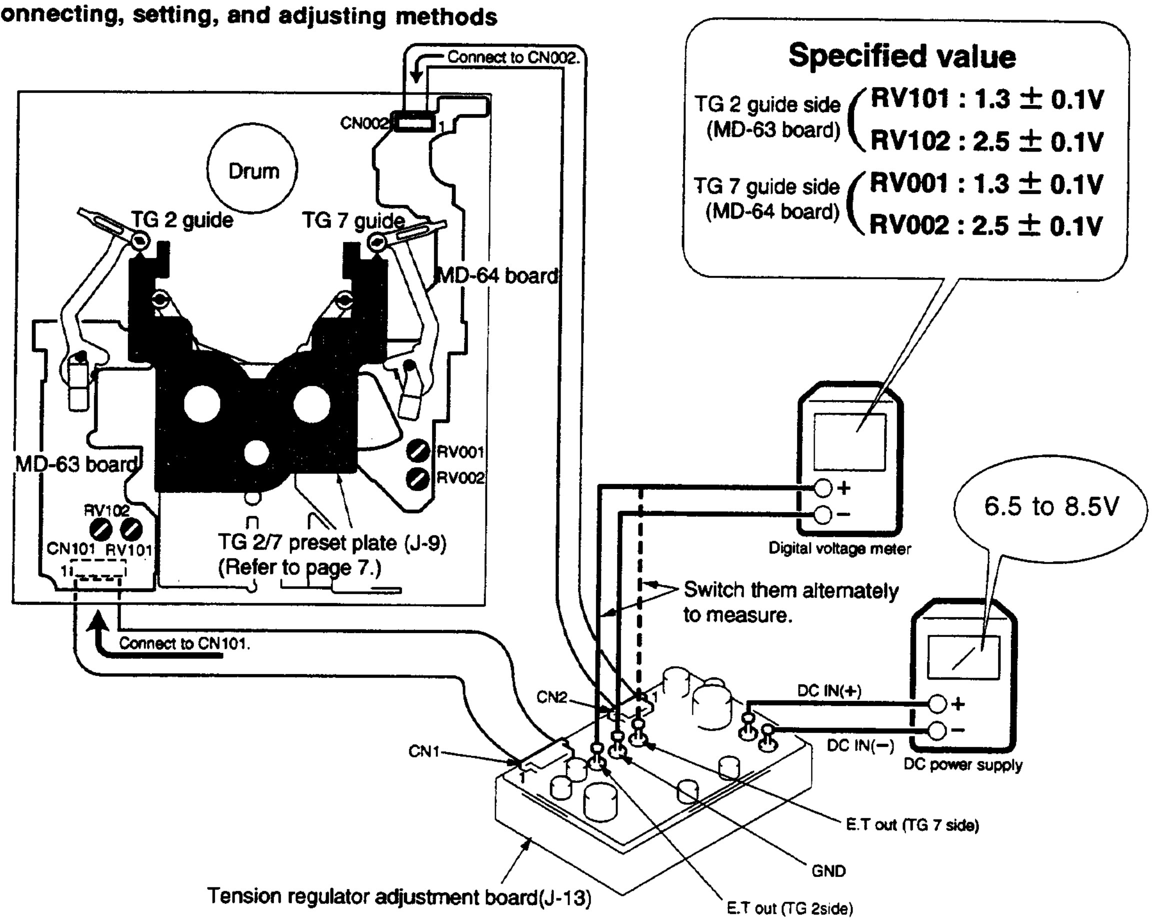
TG 2/7 preset plate (J-9)

6-3-4. TG2/TG7 ELECTRIC TENSION REGULATOR ADJUSTMENT

1. Preparation before adjustment

FL block : Remove.
Position : (LOADING (The pinch roller should be stuck.)) / (S cassette)
Jig used : Cassette standard plate (J-7), TG2/7 preset plate (J-9) and screwdriver for tape path
(For attaching jigs, refer to page 5-5.)

2. Connecting, setting, and adjusting methods

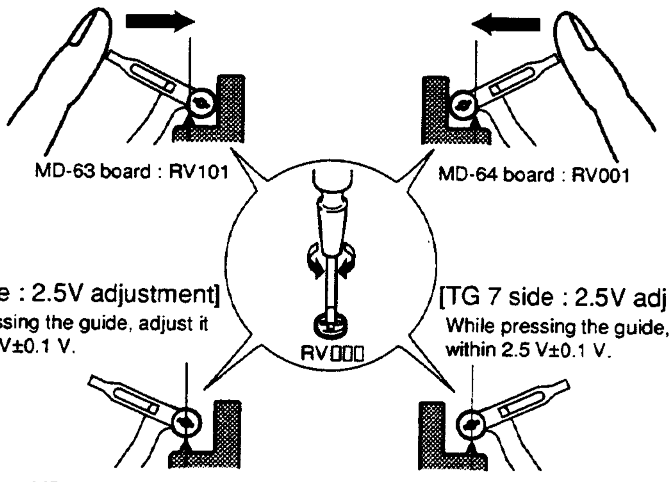

Connect to CN002.
CN002
1
Drum
TG 2 guide
TG 7 guide
MD-64 board
MD-63 board
RV001
RV002
RV102
CN101 RV101
1
TG 2/7 preset plate (J-9)
(Refer to page 7.)
Connect to CN101.
Digital voltage meter
+
−
6.5 to 8.5V
Switch them alternately to measure.
DC IN(+)
DC IN(−)
+
−
DC power supply
CN2
1
CN1
1
E.T out (TG 7 side)
GND
E.T out (TG 2side)
Tension regulator adjustment board(J-13)

Specified value

TG 2 guide side (MD-63 board) **RV101 : 1.3 ± 0.1V**
RV102 : 2.5 ± 0.1V

TG 7 guide side (MD-64 board) **RV001 : 1.3 ± 0.1V**
RV002 : 2.5 ± 0.1V

3. Adjusting


MD-63 board : RV101
MD-64 board : RV001
RV□□□
MD-63 board : RV102
MD-64 board : RV002

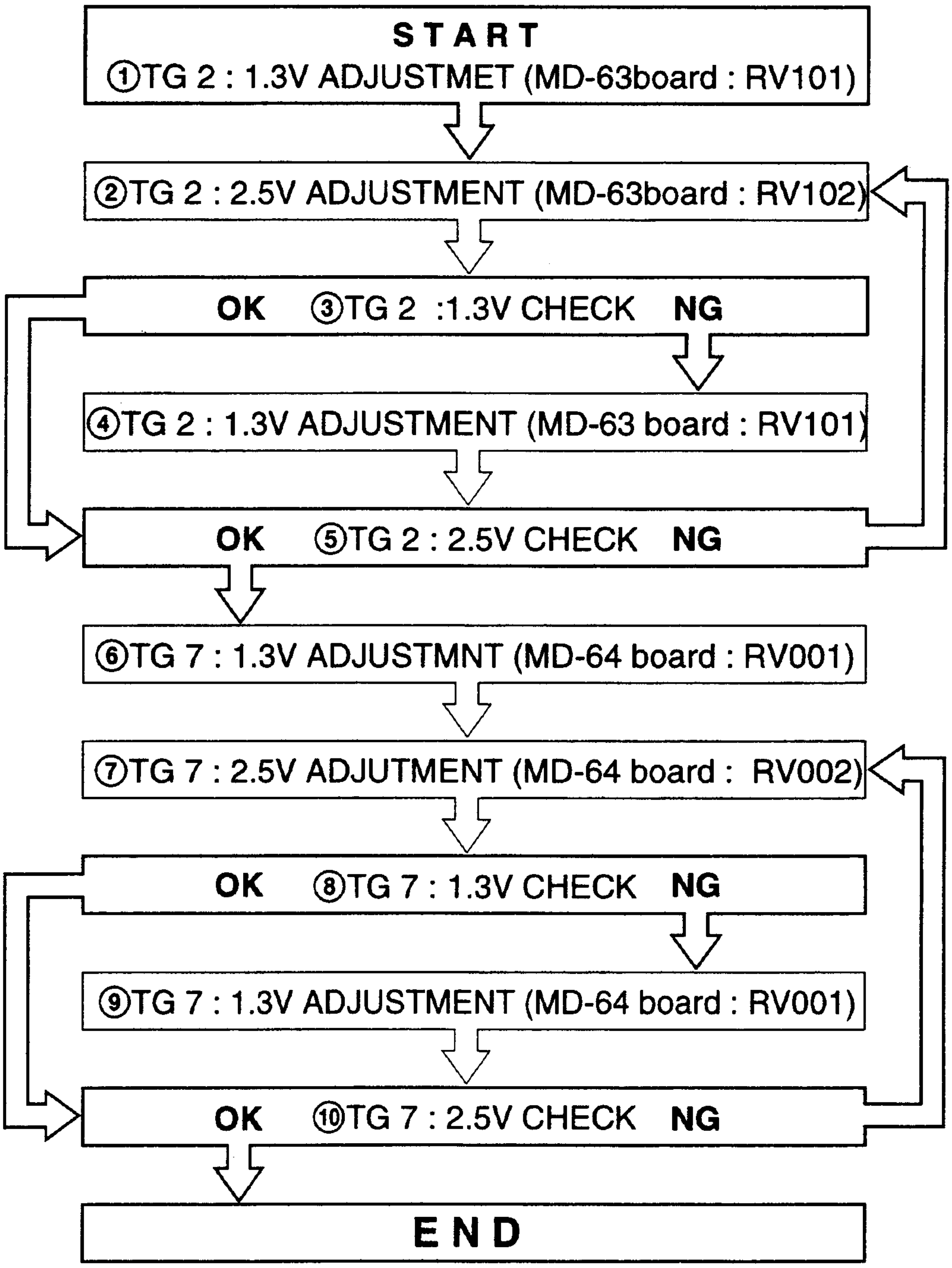
[TG 2 side : 1.3V adjustment]
While pressing the guide, adjust it within 1.3 V±0.1 V.

[TG 7 side : 1.3V adjustment]
While pressing the guide, adjust it within 1.3 V±0.1 V.

[TG 2 side : 2.5V adjustment]
While pressing the guide, adjust it within 2.5 V±0.1 V.

[TG 7 side : 2.5V adjustment]
While pressing the guide, adjust it within 2.5 V±0.1 V.

4. Adjustment order


START
①TG 2 : 1.3V ADJUSTMET (MD-63board : RV101)
②TG 2 : 2.5V ADJUSTMENT (MD-63board : RV102)
OK ③TG 2 :1.3V CHECK NG
④TG 2 : 1.3V ADJUSTMENT (MD-63 board : RV101)
OK ⑤TG 2 : 2.5V CHECK NG
⑥TG 7 : 1.3V ADJUSTMNT (MD-64 board : RV001)
⑦TG 7 : 2.5V ADJUTMENT (MD-64 board : RV002)
OK ⑧TG 7 : 1.3V CHECK NG
⑨TG 7 : 1.3V ADJUSTMENT (MD-64 board : RV001)
OK ⑩TG 7 : 2.5V CHECK NG
END

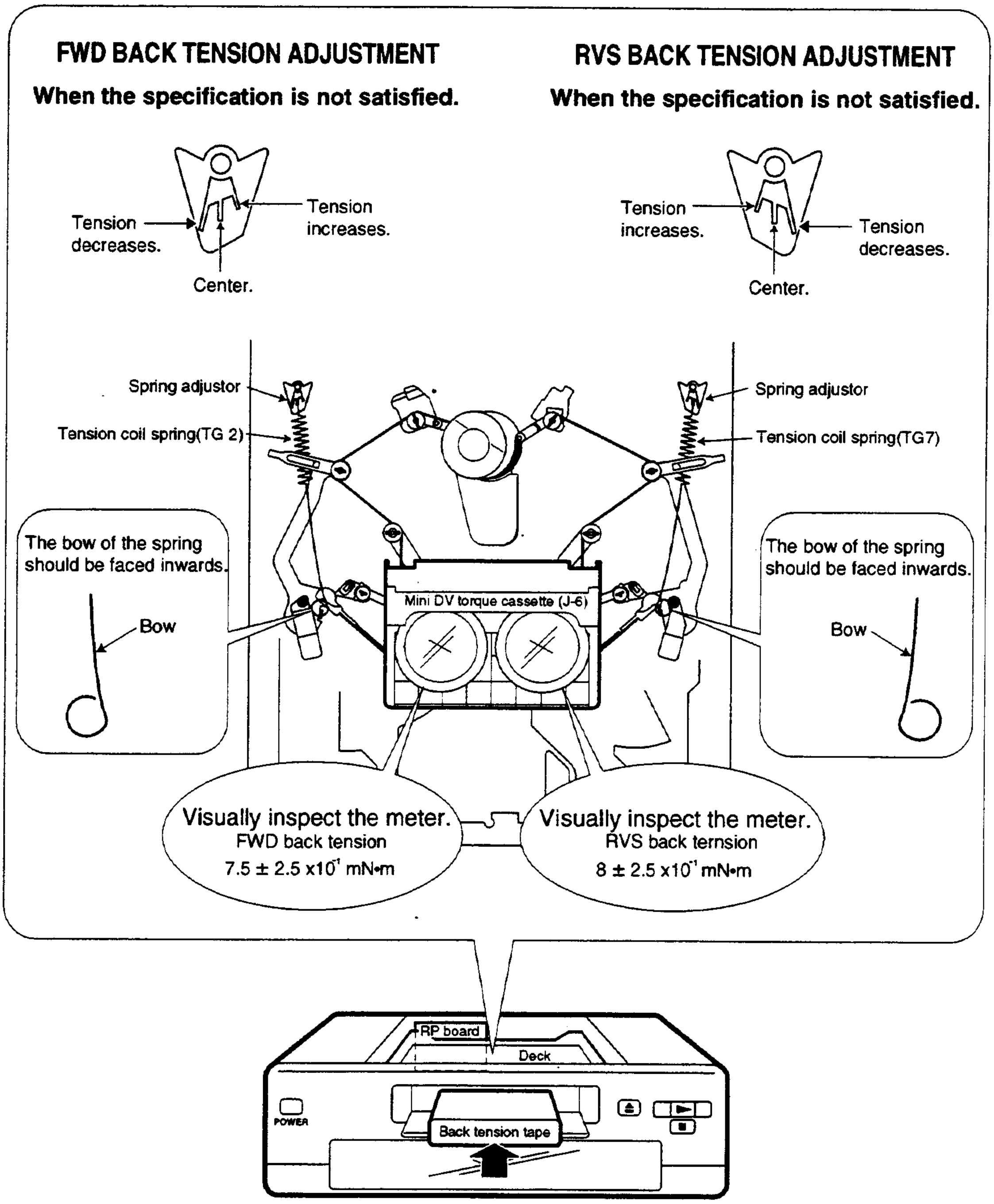
6-3-5. FWD/RVS BACK TENSION ADJUSTMENT

1. Preparation before adjustment

Mechanism deck : Install to the unit.
Jig used : Mini DV torque cassette (J-6), pinset (For change the hooking of spring.)

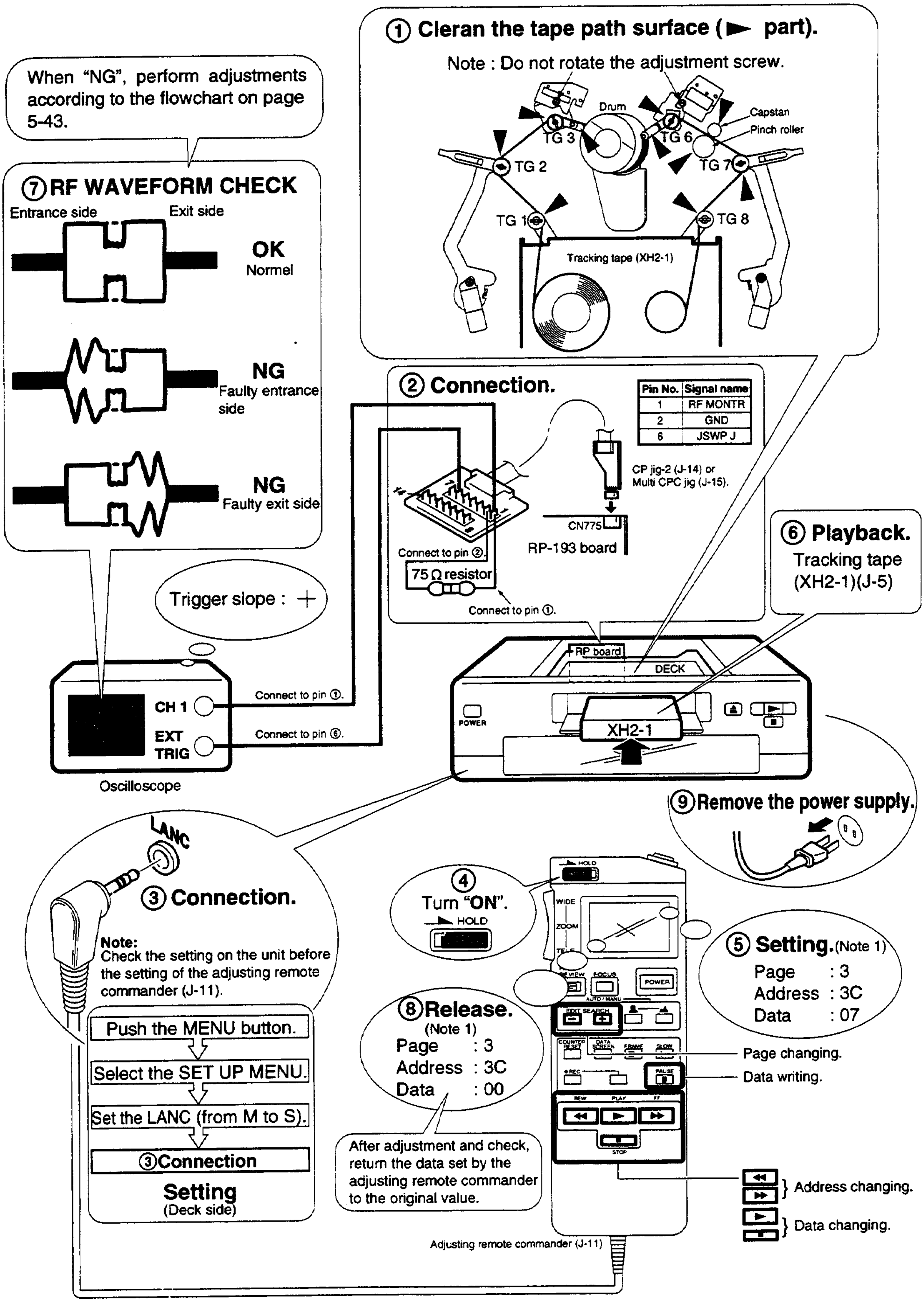
2. Adjusting

Note : At the FWD (TG2) side, measure the Mini DV torque cassette (J-6) in the FWD mode.
At the RVS (TG7) side, measure the Mini DV torque cassette (J-6) in the RVS mode.



FWD BACK TENSION ADJUSTMENT
When the specification is not satisfied.
Tension decreases.
Tension increases.
Center.
RVS BACK TENSION ADJUSTMENT
When the specification is not satisfied.
Tension increases.
Tension decreases.
Center.
Spring adjustor
Tension coil spring(TG 2)
Spring adjustor
Tension coil spring(TG7)
The bow of the spring should be faced inwards.
Bow
The bow of the spring should be faced inwards.
Bow
Mini DV torque cassette (J-6)
Visually inspect the meter.
FWD back tension
7.5 ± 2.5 x10⁻¹ mN•m
Visually inspect the meter.
RVS back ternsion
8 ± 2.5 x10⁻¹ mN•m
RP board
Deck
POWER
Back tension tape

6-3-6. ADJUSTMENT PREPARATIONS AND RF WAVEFORM CHECK


Drum
Capstan
Pinch roller
TG 3
TG 6
TG 2
TG 7
TG 1
TG 8
Tracking tape (XH2-1)
CN775
RP-193 board
Connect to pin ②.
75 Ω resistor
Connect to pin ①.
Oscilloscope
CH 1
EXT TRIG
Connect to pin ①.
Connect to pin ⑥.
RP board
DECK
POWER
XH2-1
LANC
HOLD
WIDE
ZOOM
TELE
REVIEW
FOCUS
POWER
AUTO/MANU
EDIT SEARCH
COUNTER RESET
DATA SCREEN
FRAME
SLOW
REC
PAUSE
REW
PLAY
FF
STOP
Adjusting remote commander (J-11)
Entrance side
Exit side

① Cleran the tape path surface (► part).

Note : Do not rotate the adjustment screw.

② Connection.

Pin No.	Signal name
1	RF MONTR
2	GND
6	JSWP J

CP jig-2 (J-14) or Multi CPC jig (J-15).

③ Connection.

Note:
Check the setting on the unit before the setting of the adjusting remote commander (J-11).

Push the MENU button.

Select the SET UP MENU.

Set the LANC (from M to S).

③Connection

Setting
(Deck side)

④ Turn "ON".

⑤ Setting. (Note 1)
Page : 3
Address : 3C
Data : 07

Page changing.

Data writing.

Address changing.

Data changing.

⑥ Playback.
Tracking tape (XH2-1)(J-5)

⑦ RF WAVEFORM CHECK

OK
Normel

NG
Faulty entrance side

NG
Faulty exit side

When "NG", perform adjustments according to the flowchart on page 5-43.

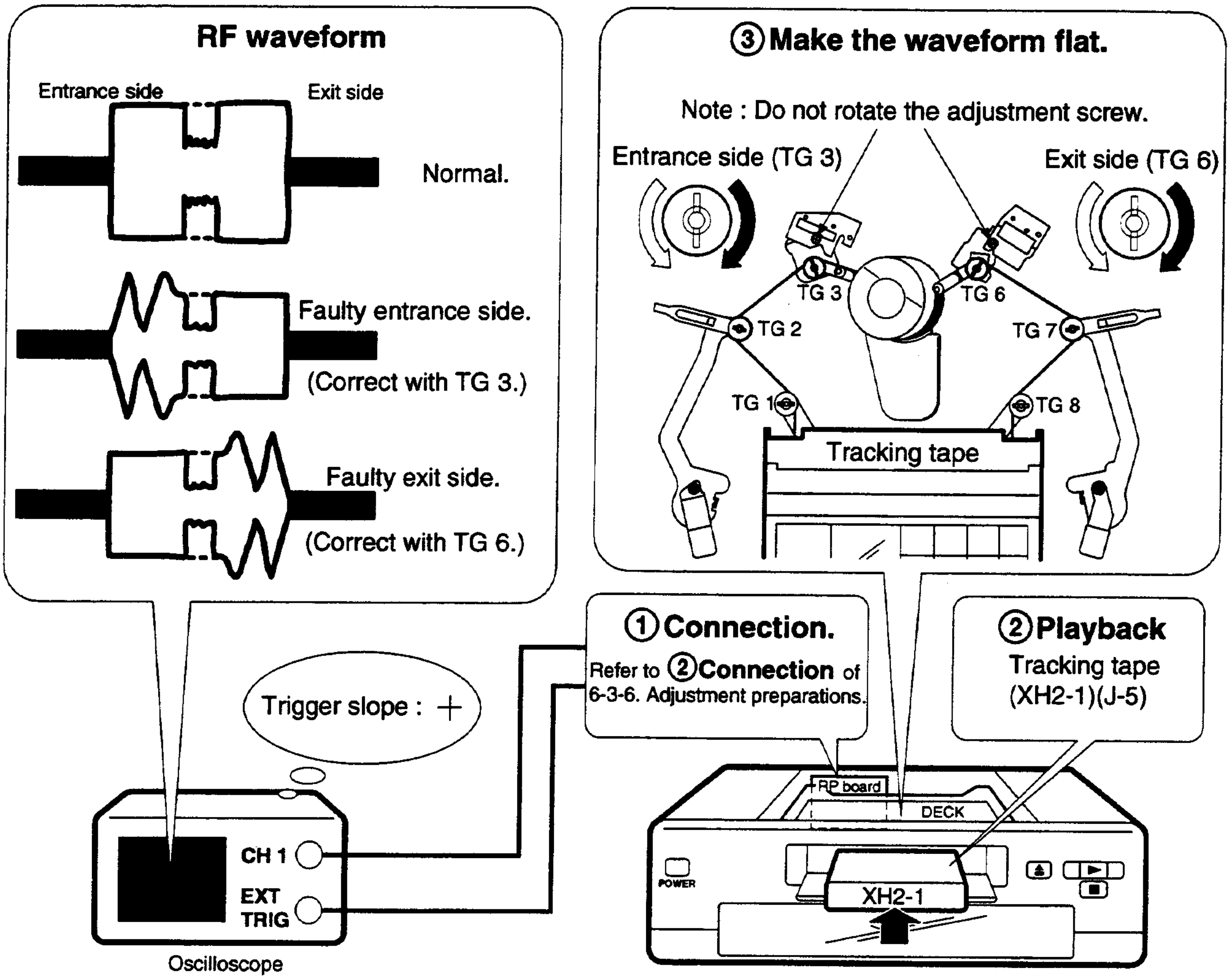
Trigger slope : +

⑧ Release.
(Note 1)
Page : 3
Address : 3C
Data : 00

After adjustment and check, return the data set by the adjusting remote commander to the original value.

⑨ Remove the power supply.

6-3-7. TRACKING ADJUSTMENT



RF waveform

③Make the waveform flat.

Note : Do not rotate the adjustment screw.

①Connection.

Refer to **②Connection** of 6-3-6. Adjustment preparations.

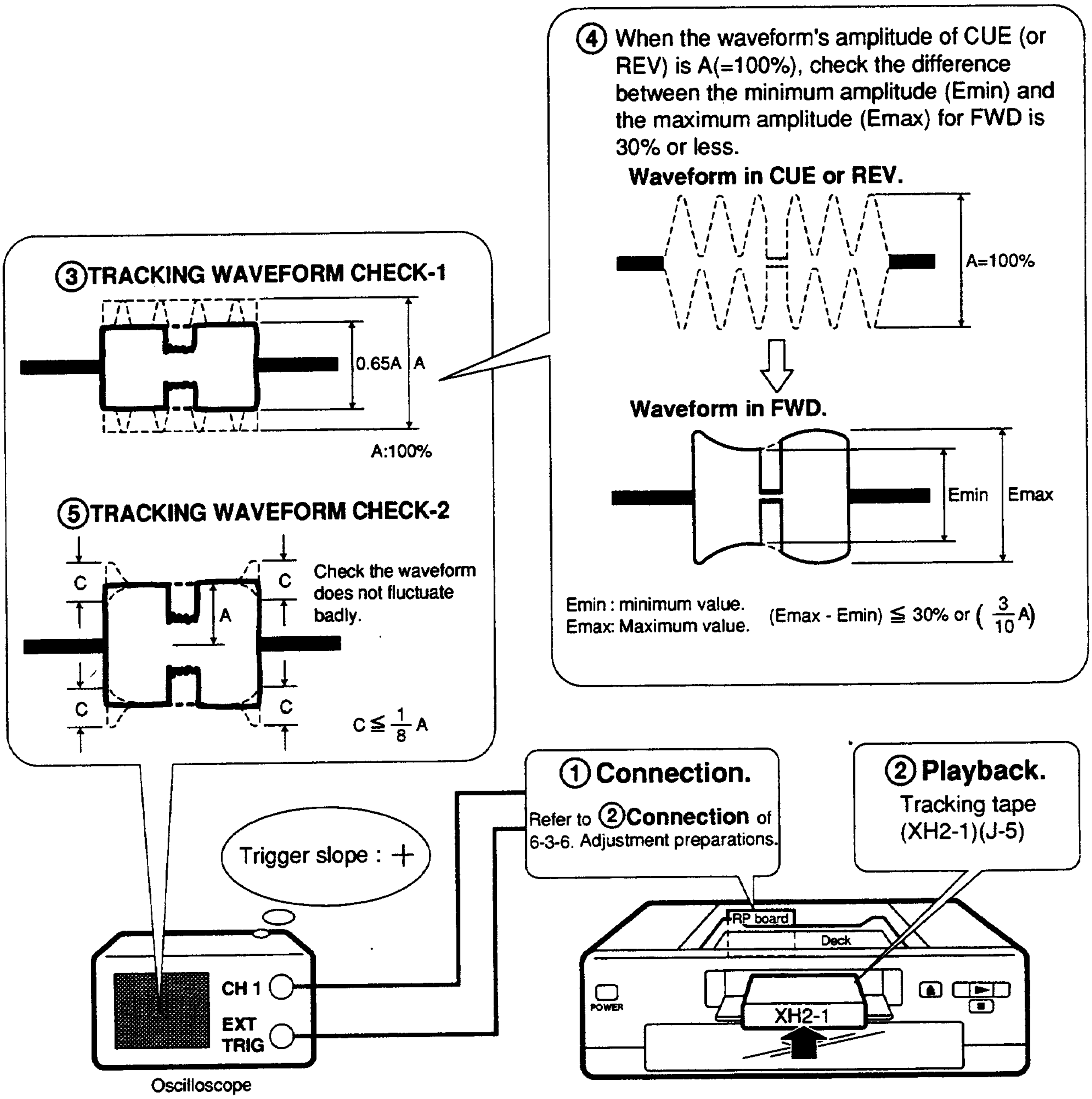
②Playback

Tracking tape (XH2-1)(J-5)

Trigger slope : +

Entrance side
Exit side
Normal.
Faulty entrance side.
(Correct with TG 3.)
Faulty exit side.
(Correct with TG 6.)
Entrance side (TG 3)
Exit side (TG 6)
TG 3
TG 6
TG 2
TG 7
TG 1
TG 8
Tracking tape
CH 1
EXT TRIG
Oscilloscope
RP board
DECK
POWER
XH2-1

6-3-8. TRACKING CHECK


0.65A
A
A:100%
A=100%
Emin
Emax
C
A
CH 1
EXT TRIG
Oscilloscope
RP board
Deck
POWER
XH2-1

① Connection.

Refer to **②Connection** of 6-3-6. Adjustment preparations.

② Playback.

Tracking tape (XH2-1)(J-5)

Trigger slope : +

③TRACKING WAVEFORM CHECK-1

④ When the waveform's amplitude of CUE (or REV) is A(=100%), check the difference between the minimum amplitude (Emin) and the maximum amplitude (Emax) for FWD is 30% or less.

Waveform in CUE or REV.

Waveform in FWD.

Emin : minimum value.
Emax: Maximum value.

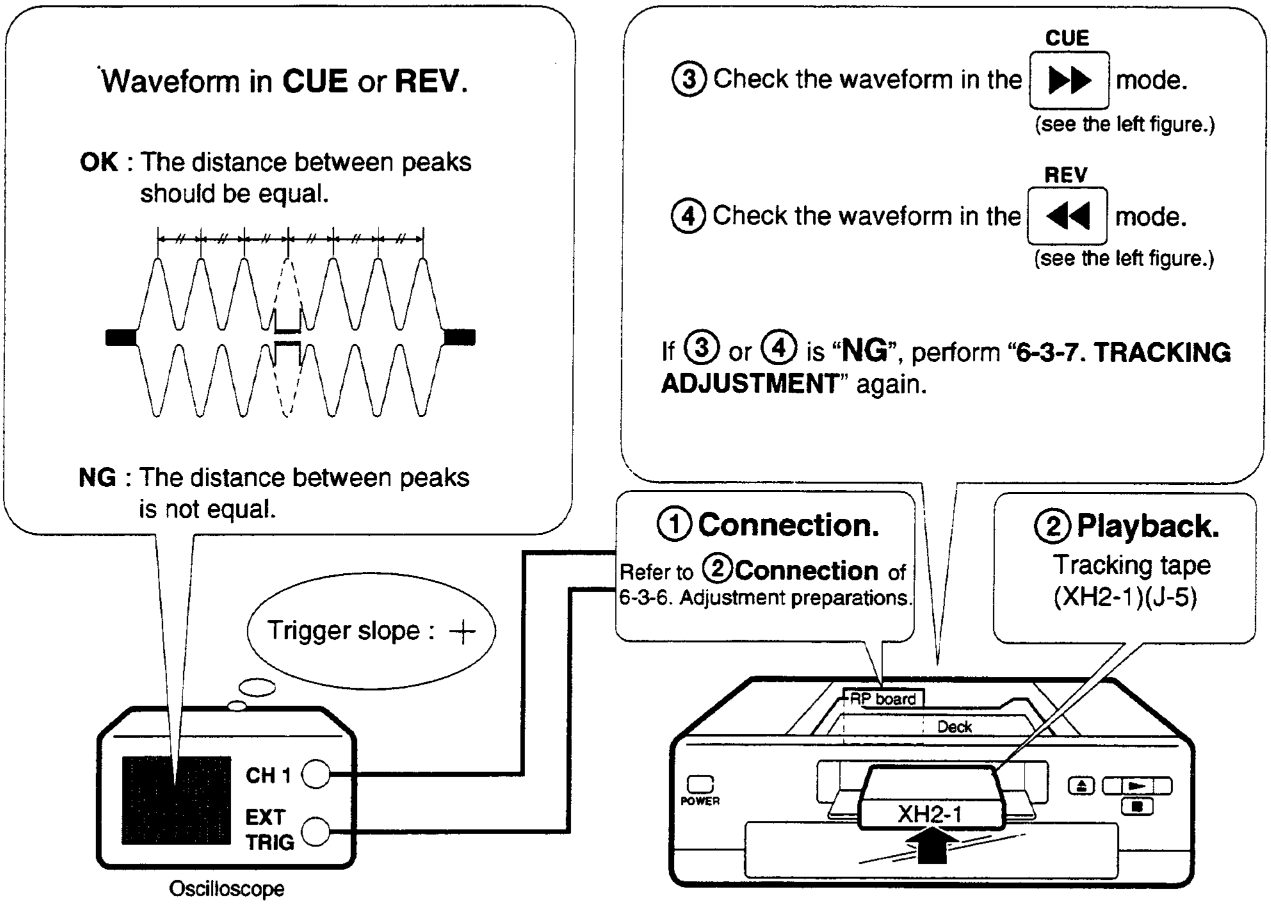
$(\text{Emax} - \text{Emin}) \leqq 30\% \text{ or } (\frac{3}{10}\text{A})$

⑤TRACKING WAVEFORM CHECK-2

Check the waveform does not fluctuate badly.

$\text{C} \leqq \frac{1}{8}\text{A}$

6-3-9. CUE AND REV CHECK



Waveform in **CUE** or **REV**.

OK : The distance between peaks should be equal.

NG : The distance between peaks is not equal.

③ Check the waveform in the **CUE** ▶▶ mode. (see the left figure.)

④ Check the waveform in the **REV** ◀◀ mode. (see the left figure.)

If ③ or ④ is "**NG**", perform "**6-3-7. TRACKING ADJUSTMENT**" again.

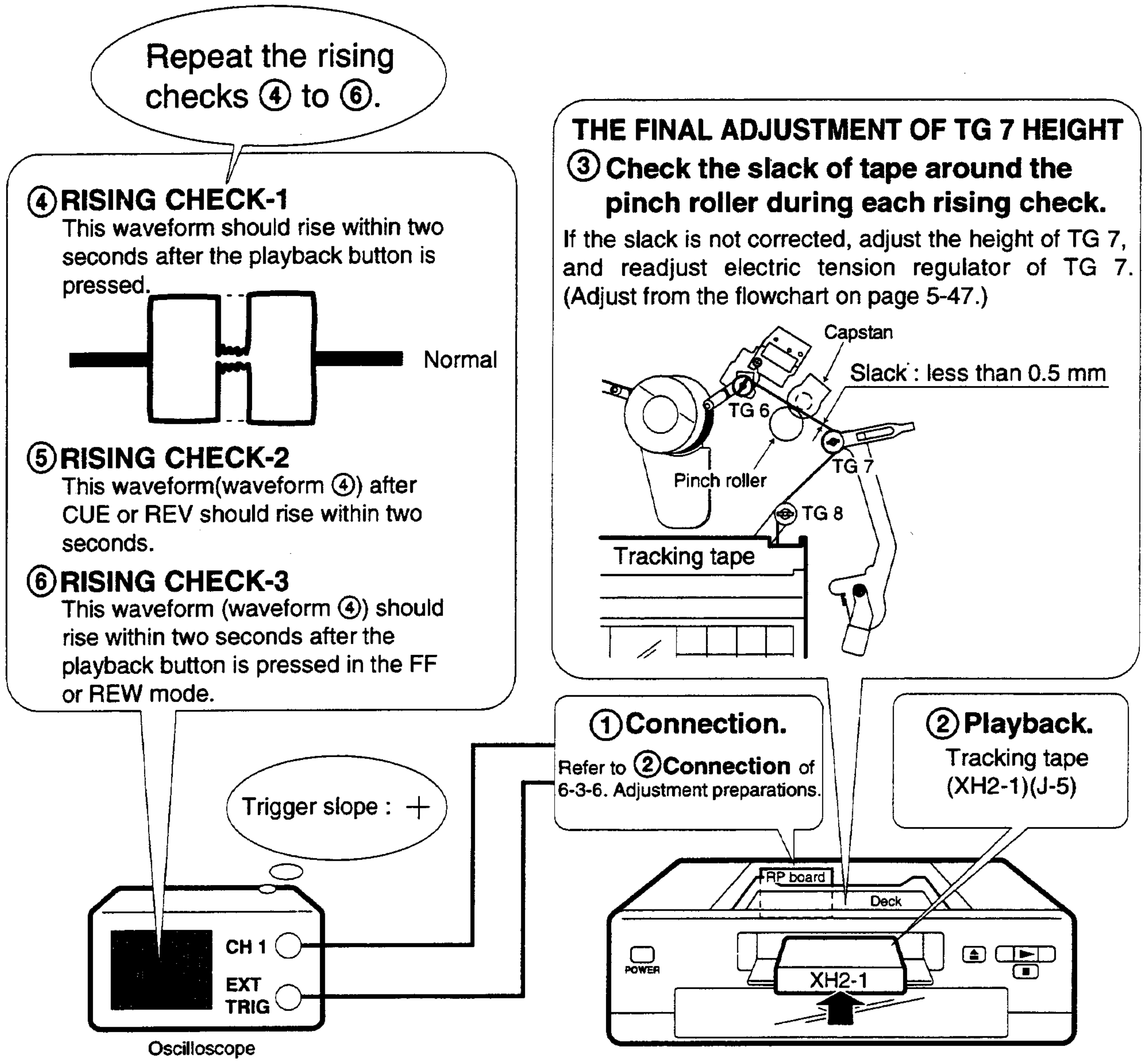
① **Connection.**
Refer to ②**Connection** of 6-3-6. Adjustment preparations.

② **Playback.**
Tracking tape (XH2-1)(J-5)

Trigger slope : +

CH 1
EXT TRIG
Oscilloscope
RP board
Deck
POWER
XH2-1

6-3-10. RISING CHECK



Repeat the rising checks ④ to ⑥.

④RISING CHECK-1
This waveform should rise within two seconds after the playback button is pressed.

⑤RISING CHECK-2
This waveform(waveform ④) after CUE or REV should rise within two seconds.

⑥RISING CHECK-3
This waveform (waveform ④) should rise within two seconds after the playback button is pressed in the FF or REW mode.

THE FINAL ADJUSTMENT OF TG 7 HEIGHT

③Check the slack of tape around the pinch roller during each rising check.

If the slack is not corrected, adjust the height of TG 7, and readjust electric tension regulator of TG 7. (Adjust from the flowchart on page 5-47.)

①Connection.
Refer to **②Connection** of 6-3-6. Adjustment preparations.

②Playback.
Tracking tape (XH2-1)(J-5)

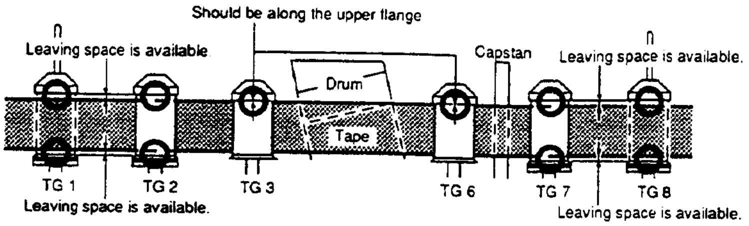
Trigger slope : +

Normal
Capstan
Slack : less than 0.5 mm
TG 6
TG 7
Pinch roller
TG 8
Tracking tape
CH 1
EXT TRIG
Oscilloscope
RP board
Deck
POWER
XH2-1

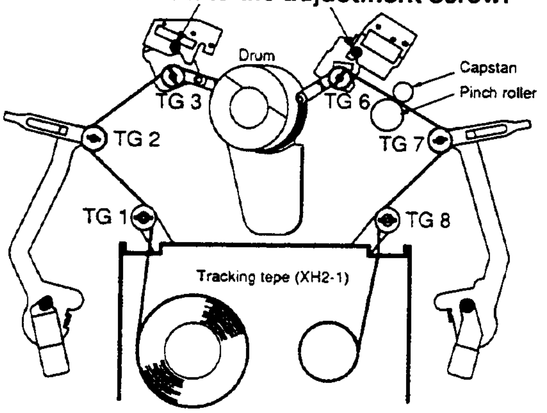
6-3-11. TAPE PATH CHECK

②It will be okayed, if there is no curls at the guides, capstan, etc. (○part) in the CUE ▶▶ and REV ◀◀ mode.

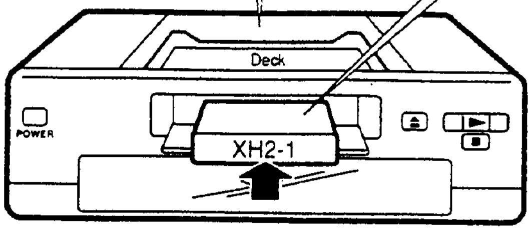
The following is ideal, but, it is satisfactory if the RF waveform is normal.


Should be along the upper flange
Leaving space is available
Capstan
Leaving space is available.
Drum
Tape
TG 1
TG 2
TG 3
TG 6
TG 7
TG 8
Leaving space is available.
Leaving space is available.

Note : Do not rotate the adjustment screw.


Drum
Capstan
Pinch roller
TG 3
TG 6
TG 2
TG 7
TG 1
TG 8
Tracking tepe (XH2-1)

① Playback.
Tracking tape
(XH2-1)(J-5)


Deck
POWER
XH2-1

③After adjutment and check, return the data set by the adjusting remote commander to the original value.

5-2. VIDEO SECTION ADJUSTMENTS

When performing adjustments, refer to the layout diagrams for adjustment related parts on page 5-84.

2-1. PREPARATIONS BEFORE ADJUSTMENT

2-1-1. Equipment Used

1) TV monitor
2) Oscilloscope with 2-phenomenon, 30 MHz band, and delay mode (Unless specified otherwise, use a 10 : 1 probe.)
3) Frequency counter
4) Digital voltmeter
5) Audio generator
6) Audio level meter
7) Audio distortion meter
8) Audio attenuator
9) Regulated power supply
10) Alignment tape
    - Tracking reference (XH2-1) Parts code: 8-967-997-01
    - SW/OL reference (XH2-3) Parts code: 8-967-997-11
    - Audio operation check for NTSC (XH5-3) Parts code: 8-967-997-51
    - System operations check for NTSC (XH5-5) Parts code: 8-967-997-61
    - Audio operation check for PAL (XH5-3P) Parts code: 8-967-997-55
    - System operation check for PAL (XH5-5P) Parts code: 8-967-997-66
11) Adjusting remote control unit (J-6082-053-B)
12) Multi CPC jig (J-6082-311-A) or CP jig 2 (J-6082-140-A)
13) Extension board
    - For extension between CN102 of the RP-193 board and CN104 of the JC-18 board.
    - For extension between CN101 of the RP-193 board and CN105 of the JC-18 board. (30P, 0.5 mm) (J-6082-270-A)
    - For extension between CN771 of the RP-193 board and drum (10P, 1 mm) (J-6082-064-A)
    - For extension between CN002 of the CM-49 board and CN870 of the VA-99 board (8P, 1mm) (J-6082-058-A)
    - For extension between CN006 of the CM-49 board and the reel motor (15P, 1.25 mm) (J-6082-354-A)
    - For extension between CN001 of the CM-49 board and CN101 of the MD-63 board (16P, 1mm) (J-6082-020-A)

2-1-2. Connection of Equipment

Input the color bar signal into the LINE1 IN terminal and perform the adjustments. Connect the measuring devices as shown in Fig. 5-2-1 according to the specifications given on which input signal to use (S VIDEO or VIDEO). Input signals are described in ( ) of the signal column. Either signal can be used if no specifications are given. To switch between S VIDEO and VIDEO, select "L1 IN VIDEO" at the menu screen, and switch to "S" (S VIDEO) or "NORM" (VIDEO).

Note 1: In adjustments specifying for the S VIDEO input to be used, using the VIDEO input would disable the product specifications of this unit from being satisfied. Always use the input signal specified.

Note 2: If adjustments are used with the VTR with the S video output terminal as the signal source, the performance of this unit may be affected by the VTR. Use a pattern generator with a Y/C separator terminal as much as possible.

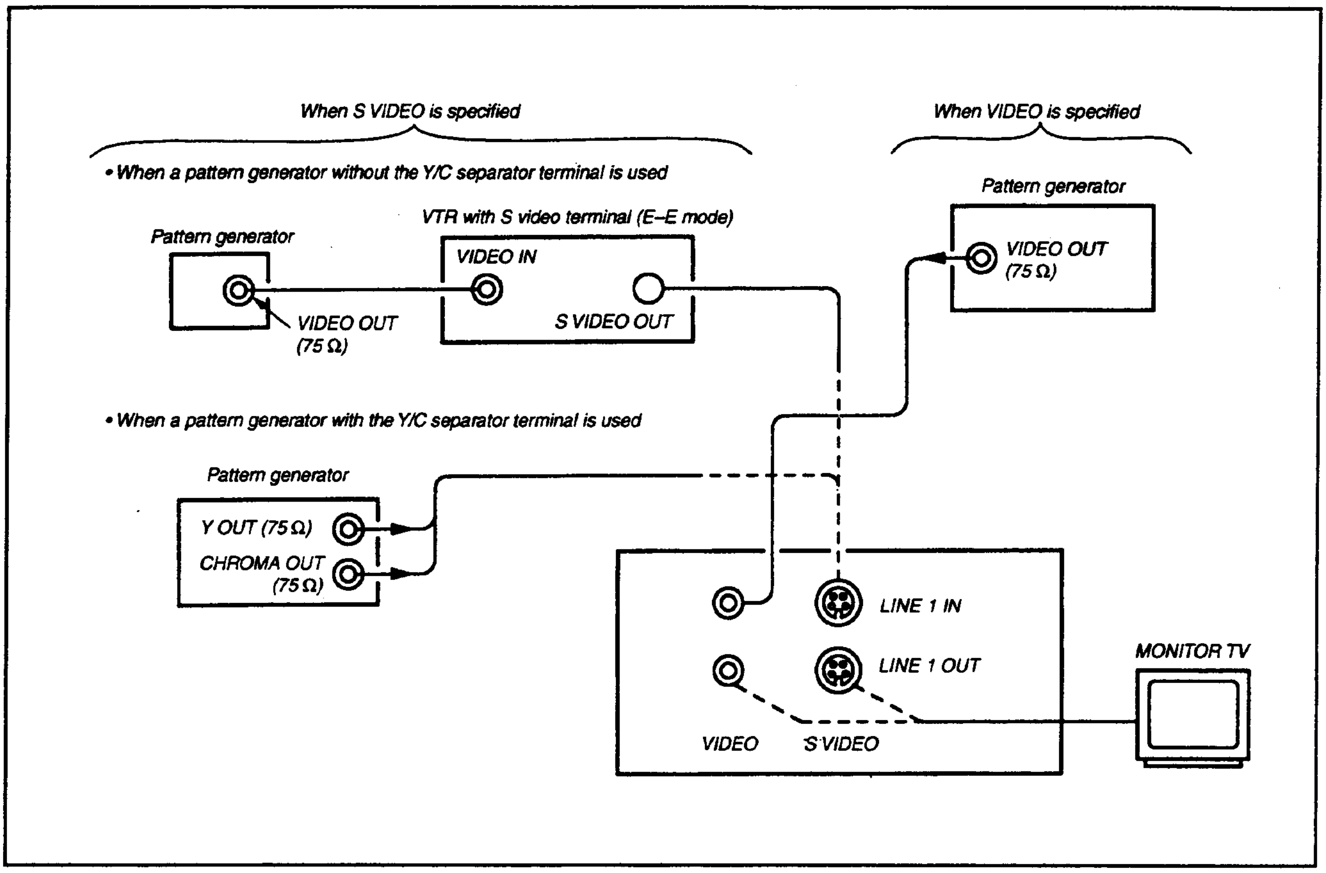

When S VIDEO is specified
• When a pattern generator without the Y/C separator terminal is used
VTR with S video terminal (E–E mode)
Pattern generator
VIDEO IN
VIDEO OUT
(75 Ω)
S VIDEO OUT
• When a pattern generator with the Y/C separator terminal is used
Pattern generator
Y OUT (75 Ω)
CHROMA OUT
(75 Ω)
When VIDEO is specified
Pattern generator
VIDEO OUT
(75 Ω)
LINE 1 IN
LINE 1 OUT
VIDEO
S VIDEO
MONITOR TV

Fig. 5-2-1.

2-1-3. Setting of Switches

Unless specified otherwise, set the switches as follows.

LANC MODE (Menu display) .... S
AUDIO MODE (Menu display) 16
AUDIO MONITOR (Tray) .... STEREO 1
AUDIO MIX BALANCE (Tray) .... Center Click
REC BALANCE (Tray) .... Center Click
REC LEVEL (Tray) .... Center Click

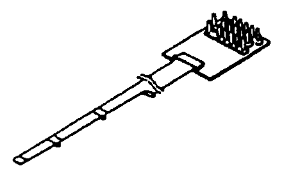
Note: Set LANC MODE and AUDIO MODE at the "SET UP MENU" of the menu screen.

2-1-4. Adjusting Connectors (RP-193 Board CN775)

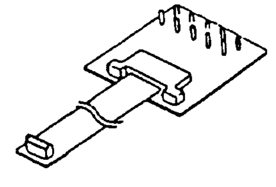
Some of the adjusting points of the video section are concentrated at CN775 of the RP-193 board. Connect the instruments via the multi CPC jig (J-6082-311-A) or CP jig-2 (J-6082-140-A).

Pin No.	Signal Name	Pin No.	Signal Name
1	RF MONTR	2	GND
3	ENV OUT	4	REF OUT
5	LOCK	6	JSWP J
7	SYCS	8	ERRP
9	VP CK CS	10	PLAJP
11	AF REF	12	SCDVCS
13	VA DV CS	14	ENV CONST

Table. 5-2-1.



J-6082-311-A



J-6082-140-A

2-1-5. Checking the Input Signals

Because the video signal obtained from the pattern generator is used as the adjustment signal for adjustments, the video output signal must satisfy the given specifications.

1. S VIDEO Input

Connect the oscilloscope to the Y signal terminal of the S VIDEO input terminal, and check that the sync signal of the Y signal is approximately <0.286> [0.30]V and that the amplitude of the video section is approximately <0.714> [0.70]V. (When a VTR with the S VIDEO output terminal is used, also check that the chroma signal and burst signal have not remained.) Connect the oscilloscope to the chroma signal terminal of the S VIDEO input terminal, and check that the burst signal amplitude of the chroma signal is approximately <0.286> [0.30]V and flat, and that the red signal amplitude of the chroma signal is approximately <0.66> [0.67]V. The Y and chroma signals used in the adjustment are shown in Fig. 5-2-2.

< >: NTSC model
[ ]: PAL model

2. VIDEO Input

Connect the oscilloscope to the VIDEO input terminal, and check that the sync signal amplitude of the video signal is approximately <0.286> [0.30]V, the amplitude of the video section is approximately <0.714> [0.70]V, the amplitude of the burst signal is approximately <0.286> [0.30]V and flat, and that the red signal amplitude of the chroma signal is approximately <0.66> [0.67]V.
The video signal (color bar) used for adjustments is shown in Fig. 5-2-3.

< >: NTSC model
[ ]: PAL model

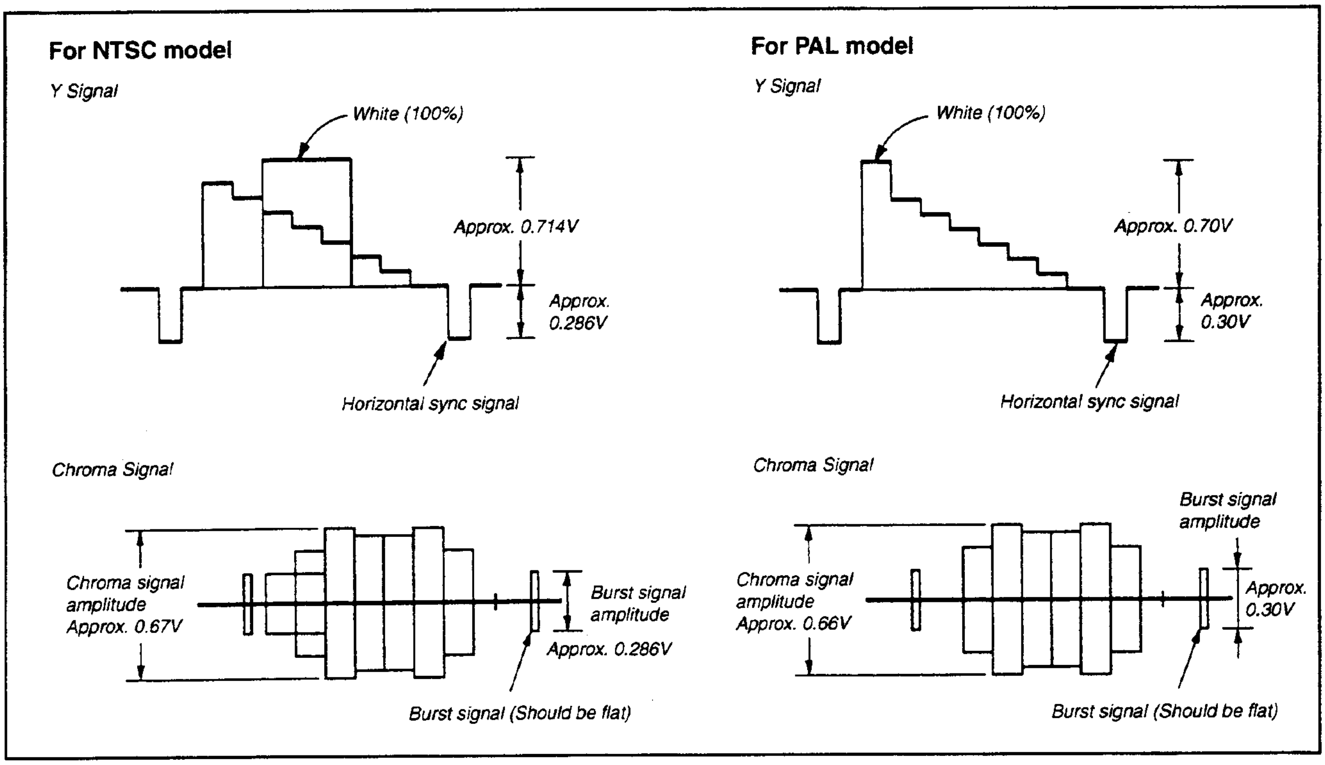

For NTSC model
Y Signal
White (100%)
Approx. 0.714V
Approx. 0.286V
Horizontal sync signal
Chroma Signal
Chroma signal amplitude Approx. 0.67V
Burst signal amplitude
Approx. 0.286V
Burst signal (Should be flat)
For PAL model
Y Signal
White (100%)
Approx. 0.70V
Approx. 0.30V
Horizontal sync signal
Chroma Signal
Burst signal amplitude
Chroma signal amplitude Approx. 0.66V
Approx. 0.30V
Burst signal (Should be flat)

Fig. 5-2-2. Color Bar Signal of Pattern Generator

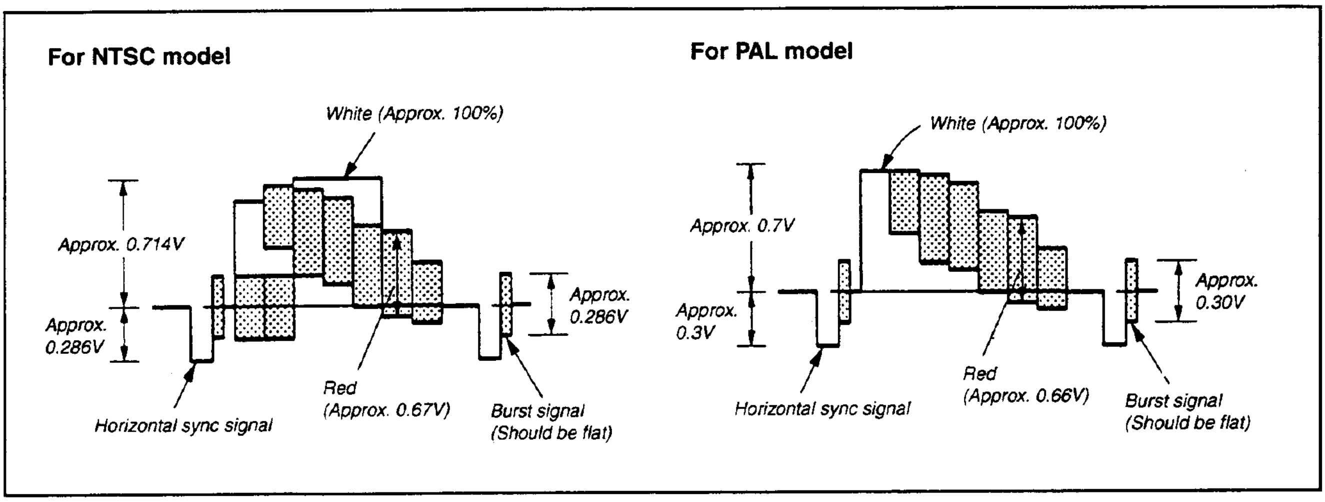

For NTSC model
White (Approx. 100%)
Approx. 0.714V
Approx. 0.286V
Approx. 0.286V
Horizontal sync signal
Red (Approx. 0.67V)
Burst signal (Should be flat)
For PAL model
White (Approx. 100%)
Approx. 0.7V
Approx. 0.3V
Approx. 0.30V
Horizontal sync signal
Red (Approx. 0.66V)
Burst signal (Should be flat)

Fig. 5-2-3. Color Bar Signal of Pattern Generator

2-1-6. Alignment Tapes

Use the alignment tapes shown in the following table.
Use tapes specified in the signal column of each adjustment.

Name	Use
Tracking standard (XH2-1)	Tape path adjustment
SW/OL standard (XH2-3)	Switching position adjustment
Audio operation check (XH5-3 (NTSC), XH5-3P (PAL))	Audio system adjustment
System operation check (XH5-5 (NTSC), XH5-5P (PAL))	Operation check

Table. 5-2-2.

Fig. 5-2-4. shows the 75% color bar signals recorded on the alignment tape for Audio Operation Check (NTSC).

Note: Measure with video terminal (Terminated at 75 Ω)

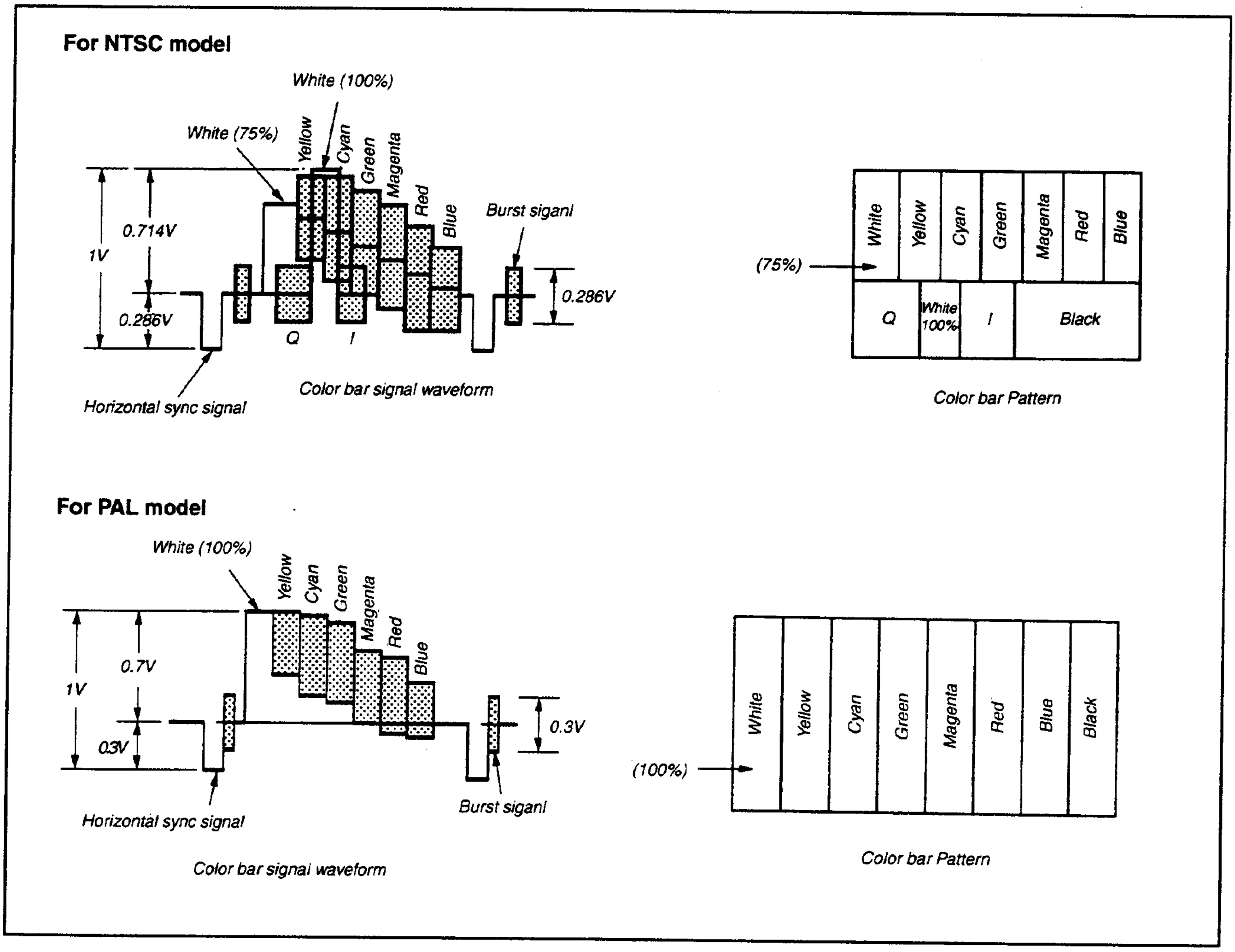

For NTSC model
White (100%)
White (75%)
Yellow
Cyan
Green
Magenta
Red
Blue
Burst siganl
0.714V
1V
0.286V
0.286V
Q
I
Horizontal sync signal
Color bar signal waveform
(75%)
White
Yellow
Cyan
Green
Magenta
Red
Blue
Q
White 100%
I
Black
Color bar Pattern
For PAL model
White (100%)
Yellow
Cyan
Green
Magenta
Red
Blue
0.7V
1V
0.3V
0.3V
Horizontal sync signal
Burst siganl
Color bar signal waveform
(100%)
White
Yellow
Cyan
Green
Magenta
Red
Blue
Black
Color bar Pattern

Fig. 5-2-4. Color Bar Signal of Alignment Tapes

2-1-7. Input/Output Level and Impedance

LINE IN 1 and 2

VIDEO IN, BNC connector (LINE IN 1), phono jack (LINE IN 2)
Input signal : 1 Vp-p, 75 Ω, unbalanced, sync negative
AUDIO IN, phono jack (2 each)
Input level : 2 Vrms (Full bit)
Input impedance : more than 47 kΩ
S1 VIDEO IN, Mini DIN 4-pin connector (1 each)
Y (luminance signal) : 1 Vp-p, 75 Ω, unbalanced, sync negative
C (color signal) : 0.286 Vp-p (NTSC), 0.3 Vp-p (PAL), 75 Ω, unbalanced

LINE OUT 1 and 2

VIDEO OUT, BNC connector (1 each)
Output signal : 1 Vp-p, 75 Ω, unbalanced, sync negative
AUDIO OUT phono jack (2 each)
Output level : 2 Vrms (Full bit)
Load impedance : 47 kΩ
Output impedance : less than 10 kΩ
S1 VIDEO OUT, Mini DIN 4-pin connector (1 each)
Y (luminance signal) : 1 Vp-p, 75 Ω, unbalanced, sync negative
C (color signal) : 0.286 Vp-p (NTSC), 0.3 Vp-p (PAL), 75 Ω, unbalanced

2-1-8. Page D Address List

Note 1: The adjustment data initial value is the data input before the video section adjustments (Page D) are performed when the page D data have been lost accidentally.

Note 2: The ← mark shown in the adjustment data memory column indicates that the address data is fixed and is the same as the initial value.

Address	Adjustment Data	
	Initial Value	Memory Column
00	00	←
01	00	←
02	25	←
03	40	←
04	10	←
05	0E (NTSC), 0A (PAL)	←
06	73	←
07	10	←
08	84	←
09	2A	←
0A	6C	←
0B	6C	←
0C	27	←
0D	12	←
0E	E7	←
0F	FF	←
10	00	←
11	32 (NTSC), 34 (PAL)	←
12	60	←
13	00	←
14	12	←
15	00	←
16	4D	←
17	2C	←
18	0B (NTSC), 0D (PAL)	←
19	00	←
1A	11	←
1B	19	←
1C	94	←
1D	40 (NTSC), 41 (PAL)	←
1E	00	←
1F	01	←
20	65	←
21	43	←
22	65 (NTSC), F8 (PAL)	←
23	43 (NTSC), 3F (PAL)	←
24	00	←
25	00	←

Table. 5-2-3 (1).

Address	Adjustment Data	
	Initial Value	Memory Column
26	00	←
27	11	←
28	19	←
29	00	←
2A	80	←
2B	2A	←
2C	01	←
2D	01	←
2E		
2F		
30		
31	08	←
32	00	←
33	46	←
34	6A (NTSC), 56 (PAL)	←
35	02	←
36	0B	←
37	68 (NTSC), 56 (PAL)	←
38	4E (NTSC), 57 (PAL)	←
39	4E (NTSC), 57 (PAL)	←
3A	66 (NTSC), 54 (PAL)	←
3B	80	←
3C		
3D	00	←
3E	00	←
3F		
40		
41		
42		
43		
44		
45		
46		
47		
48	80	
49	80	
4A	80	
4B		
4C		
4D		
4E		
4F		

Table. 5-2-3 (2).

2-1-9. Page C Address List

Note 1: The adjustment data initial value is the data input before the video section adjustments (Page C) are performed when the page C data have been lost accidentally.

Note 2: The ← mark shown in the adjustment data memory column indicates that the address data is fixed and is the same as the initial value.

Address	Adjustment Data	
	Initial Value	Memory Column
00	DC	←
01	02	←
02	43	←
03	37	←
04	98	←
05	64	←
06	98	←
07	64	←
08	9E	←
09	49	←
0A	9E	←
0B	49	←
0C	DB	←
0D	40	←
0E	9D	←
0F	03	←
10	A2	←
11	49	←
12	B4	←
13	82	←
14	FB	←
15	3F	←
16	FF	←
17	FF	←
18	07	←
19	07	←
1A	FF	←
1B	FF	←
1C	FF	←
1D	FF	←
1E	FF	←
1F	FF	←
20	FC	←
21	FF	←
22	FF	←
23	FF	←
24	FF	←
25	FF	←

Table. 5-2-4 (1).

Address	Adjustment Data	
	Initial Value	Memory Column
26	FF	←
27	FF	←
28	FF	←
29	FF	←
2A	FF	←
2B	FF	←
2C	FF	←
2D	FF	←
2E	FF	←
2F	FF	←
30	00	
31	00	
32	00	
33	00	
34	00	
35	00	
36	00	
37	00	
38	00	
39	00	
3A	00	
3B	00	
3C	F8	
3D	F8	
3E	70	
3F	70	
40	C0	
41	C0	
42	90	
43	90	
44	86	
45	65	←
46	86	
47	C8	
48	49	←
49	E2	←
4A	B3	←
4B	0E	←
4C	00	
4D	00	
4E	00	
4F	00	
50	00	

Table. 5-2-4 (2).

Address	Adjustment Data	
	Initial Value	Memory Column
51	00	
52	FF	←
53	FF	←
54	00	←
55	00	←
56	FF	←
57	FF	←
58	FF	←
59	00	←
5A	84	←
5B	00	←
5C	00	←
5D	00	←
5E	13	←
5F	0C	←
60	72	←
61	00	←
62	00	←
63	00	←
64	32	←
65	20	←
66	00	
67	01	
68	00	
69	00	
6A	00	
6B	06	
6C	00	
6D	00	
6E	00	
6F	00	

Table. 5-2-4 (3).

2-2. POWER SUPPLY SYSTEM ADJUSTMENTS

1. Power Supply Voltage Check (PS-348 (PAL)/PS-395 (NTSC) Board)

Mode	Playback
Signal	Any tape
Measuring Instrument	Digital voltmeter
J3.1V Check	
Measuring Point	Pin ① of CN006
Specified Value	3.1 ± 0.2 Vdc
SW 5V Check	
Measuring Point	Pin ③ of CN006
Specified Value	5.0 ± 0.3 Vdc
SW –5V Check	
Measuring Point	Pin ⑤ of CN006
Specified Value	–5.0 ± 0.3 Vdc
SW 7V Check	
Measuring Point	Pin ④ of CN005
Specified Value	7.0 ± 0.3 Vdc
UNSW 6V Check	
Measuring Point	Pin ⑤ of CN005
Specified Value	6.0 ± 0.3 Vdc
UNSW 14V Check	
Measuring Point	Pin ⑥ of CN005
Specified Value	12.7 to 16.0 Vdc
AUDIO –10V Check	
Measuring Point	Pin ③ of CN007
Specified Value	–8.5 to –16 Vdc
AUDIO –6V Check	
Measuring Point	Pin ④ of CN007
Specified Value	–6.5 to –14 Vdc
TRAY 14V Check	
Measuring Point	Pin ㉑ of CN007
Specified Value	12.7 to 16.0 Vdc
UNSW 5V Check	
Measuring Point	Pin ⑱ of CN007
Specified Value	5.0 ± 0.3 Vdc
UNSW 9V Check	
Measuring Point	Pin ⑲ of CN007
Specified Value	9.0 ± 0.3 Vdc

2-3. SYSTEM CONTROL SYSTEM ADJUSTMENTS

1. Page D Initial Value Input.

If the page D data has been erased by accident, input the page D initial value first before performing adjustments. For the initial value, refer to "2-1-8. Page D Address List".

Mode	E-E
Signal	Arbitrary
Adjustment Page	D
Adjustment Address	00 to 4A

Input method:

1) Set data: 01 to page: 1, address: 00.
2) Select page D and input the initial value to each address.
   (After setting the data (initial value), before changing the address, be sure to press the PAUSE button of the adjusting remote commander.)
3) After inputting all initial values, set data: 00 to page: 1, address: 00.

2. Page C Initial Value Input.

If the page C data has been erased by accident, input the page C initial value first before performing adjustments. For the initial value, refer to "2-1-9. Page C Address List".

Mode	E-E
Signal	Arbitrary
Adjustment Page	C
Adjustment Address	00 to 6F

Input method:

1) Set data: 01 to page: 1, address: 00.
2) Select page C and input the initial value to each address.
   (After setting the data (initial value), before changing the address, be sure to press the PAUSE button of the adjusting remote commander.)
3) After inputting all initial values, set data: 00 to page: 1, address: 00.

3. Page E Initial Value Input.

If the page E data has been erased by accident, input the page E initial value first before performing adjustments.

Mode	E-E
Signal	Arbitrary
Adjustment Page	E
Adjustment Address	09, 0A, 0C, to 0F

Input method:

1) Set data: 01 to page: 1, address: 00.
2) Select page E and input the initial value show in the following table to each address.
   (After setting the data (initial value), before changing the address, be sure to press the PAUSE button of the adjusting remote commander.)
3) After inputting all initial values, set data: 00 to page: 1, address: 00.

Address	Data
09	0A
0A	09
0C	00 (NTSC), 03 (PAL)
0D	55 (NTSC), AA (PAL)
0E	22
0F	20

4. Timer Clock Adjustment (FM-26 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point	Pin (99) of IC501 (CL499)
Measuring Instrument	Frequency counter
Adjusting Element	CT501
Specified Value	f=2048.01 ± 0.005 Hz

Adjusting method:

1) Set data: 06 to page: 0, address: FF.
2) Set data: 20 to page: 2, address: AD.
3) Set the frequency (f) to the specified value using CT501.
4) Set data: 00 to page: 2, address: AD.
5) Set data: 00 to page: 0, address: FF.

2-4. SERVO SYSTEM ADJUSTMENTS

1. Switching Position Adjustments (RP-193 Board)

1-1. Switching Position Rough Adjustment

Mode	Playback
Signal	SW/OL reference tape
Measurement Point	CH1: Pin ① of CN775 (RF MONITOR) Note 1 CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope TRIG. SOURCE: CH2
Adjustment Page	C
Adjustment Address	4C to 4F
Specified Value	T1=141μ sec, T2=141μ sec

Note 1: Connect a 75 Ω resistor between Pins ① and ② (GND) of CN775 (Parts code: 1-247-804-11).

Adjusting method:

1) Set data: 01 to page: 1, address: 00.
2) Write data: 00 to page: C, addresses: 4C to 4F.

To write the data, press the PAUSE button of the adjusting remote commander each time data is set.

3) Change the data of page: C, address: 4C, and take T1 as the specified value. (Note 2)
4) Press the PAUSE button of the adjusting remote commander.
5) Set data: 00 to page: 1, address: 00.
6) Perform the "RP-193 board Adjustment" of "VIDEO SYSTEM ADJUSTMENT" in advance, "Switching Position Fine Adjustments".

Note 2: If not adjusted accurately, "Switching Position Fine Adjustment" cannot be performed. The data displayed is fixed at 7F.
If T1 does not satisfy the specified value even when the data of address: 4C is changed, change the data of address: 4D.

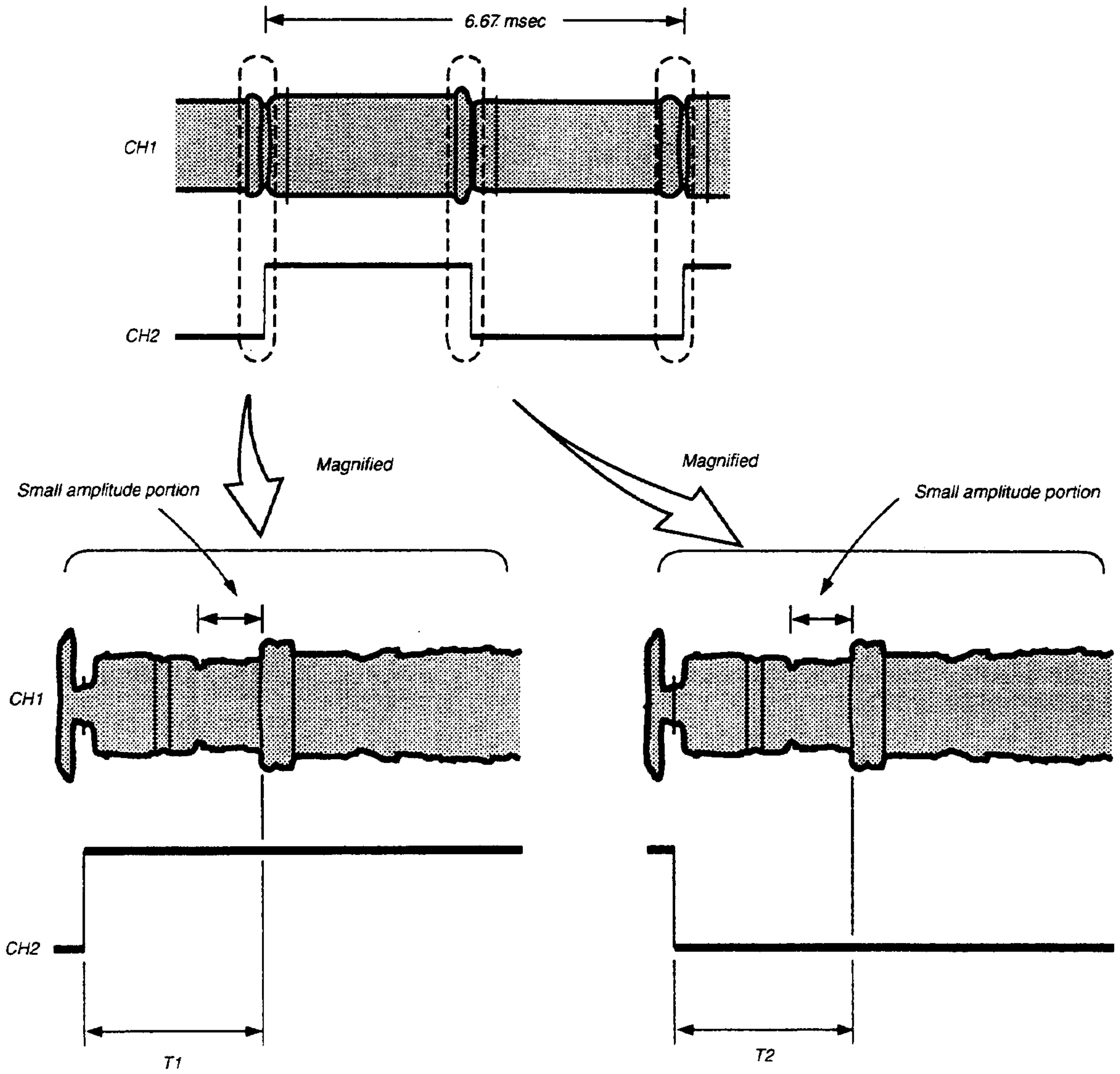


Fig. 5-2-5.

1-2. Switching Position Fine Adjustment

Mode	Playback
Signal	SW/OL reference tape
Measurement Point	Page: 3, addresses: 08 and 09 display data and Oscilloscope
Measuring Instrument	CH1: Pin ① of CN775 (RF MONITOR) Note 3 CH2: Pin ⑥ of CN775 (JSWP) TRIG, SOURCE: CH2
Adjustment Page	C
Adjustment Address	4C, 4E
Specified Value	The numbers "F8" to "FF" and "00" to "08" are displayed alternately and consistently at page: 3, addresses: 08 and 09.

Note 1: Referm the "RP-193 Board Adjustment" of "VIDEO SYSTEM ADJUSTMENT" in advance.

Adjusting method:

1) Set data: 01 to page: 1, address: 00.
2) Set data: 03 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
3) Read the average value D_{08} of the data displayed for page: 3, address: 08, and calculate as follows using this value.
   [If D_{08} is "80" to "FF"]
   Obtain the revised value from the following equation, and deduct it from the data of page: C, address: 4C. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
   Revised value=FF−D_{08} (Hexadecimal calculation. Refer to the following table.)
   [If D_{08} is "00" to "7E"]
   Add D_{08} to the data of page: C, address: 4C. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
   [If D_{08} is "7F"]
   It indicates that "Switching Position Rough Adjustment" is not completed. Repeat from step 3) of "Switching Position Rough Adjustment". (Note 2)
4) Read the displayed data of page: 3, address: 08, and check that the numbers "F8" to "FF" and "00" to "08" are displayed alternately and consistently at page: 3, address: 08.
   (If the data changes rapidly and the lower digits cannot be read, check that "0" and "F" are displayed alternately and consistently at the upper digit of the data displayed. If they are not, repeat from step 3) of "Switching Position Rough Adjustment".)
5) Connect the oscilloscope to the measuring point.
6) Change the data of page: C, address: 4E, and set T2 as 141μ sec.
7) Press the PAUSE button of the adjusting remote commander.
8) Read the average value D_{09} of the displayed data of page: 3, address: 09, and calculate as follows using this value.
   [If D_{09} is "80" to "FF"]
   Obtain the revised value from the following equation, and deduct it from the data of page: C, address: 4E. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
   Revised value=FF−D_{09} (Hexadecimal calculation. Refer to the following table.)
   [If D_{09} is "00" to "7E"]
   Add D_{09} to the data of page: C, address: 4E. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
   [If D_{09} is "7F"]
   It indicates that the adjustment of step 6) has not been performed properly. Repeat from step 5).
9) Read the displayed data of page: 3, address: 09, and check that the numbers "F8" to "FF" and "00" to "08" are displayed alternately and consistently.
   (If the data changes rapidly and the lower digits cannot be read, check that "0" and "F" are displayed alternately and consistently at the upper digit of the data displayed. If they are not, repeat from step 5).)
10) Set data: 00 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
11) Set data: 00 to page: 1, address: 00.

Note 2: If the displayed data is "7F" no matter how many times the adjustment is performed, it indicates that IC774 is faulty.

Note 3: Connect a 75 Ω resistor between Pins ① and ② (GND) of CN775 (Parts code: 1-247-804-11).

D_{08} or D_{09}	FE	FD	FC	FB	FA	F9	F8	F7	F6	F5	F4	F3	F2	F1	F0
Revised Value (Hexadecimal)	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

2-5. VIDEO SYSTEM ADJUSTMENTS

2-5-1. RP-193 Board Adjustments

1. Recording Current Adjustment (RP-193 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point	ODDch adjustment CH1: Pin ⑥ of CN771 (CL816) CH2: Pin ⑤ of CN771 (CL815) EVENch adjustment CH1: Pin ③ of CN771 (CL813) CH2: Pin ② of CN771 (CL812)
Measuring Instrument	Oscilloscope ADD mode CH2 INV mode
Adjustment Page	C
Adjustment Address	3E, 3F
Specified Value	A=4.0 ± 0.1 Vp-p

Connection: Disconnect CN771 and connect as follows.

1) ODDch adjustment: Connect a 180 Ω resistor between Pin ⑥ of CN771 (CL816) and Pin ⑤ of CN771 (CL815).
2) EVENch adjustment: Connect a 180 Ω resistor between Pin ③ of CN771 (CL813) and Pin ② of CN771 (CL812).
   180 Ω resistor (Parts code: 1-249-408-11)

Adjusting method:

1) Equalize the vertical range of CH1 and CH2 of the oscilloscope.
2) Set the oscilloscope to the ADD mode, and set CH2 to the INV mode.
3) Set data: 01 to page: 1, address: 00.
4) Set data: 0C to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
5) Set data: 85 to page: 3, address: 34.
6) Change the data of page: C, address: 3F (ODDch adjustment) or address: 3E (EVENch adjustment), and adjust the signal voltage (A) to the specified value, press the PAUSE button on the adjustment remote commander.
7) Set data: 80 to page: 3, address: 34.
8) Set data: 00 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
9) Set data: 00 to page: 1, address: 00.

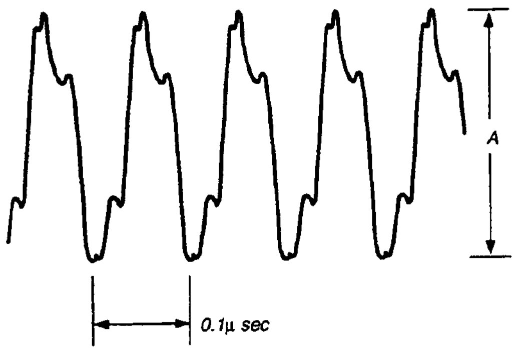


Fig. 5-2-6.

2. PLL fo Adjustment (RP-193 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point Measuring Instrument	Displayed data of page: 3, address: 04
Adjustment Page	C
Adjustment Address	3D, 3C
Specified Value	Displayed data is “FD” to “FF”, “00” to “03” (“FF”, “00” are center values)

Adjusting method:

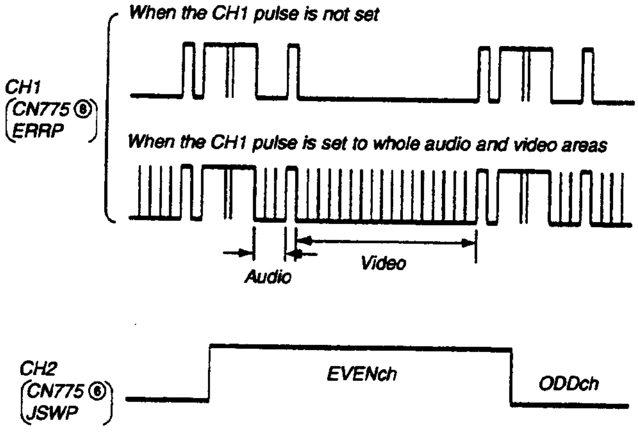
1) Set data: 01 to page: 1, address: 00.
2) Set data: 05 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
3) Set data: 0E to page: 3, address: 36.
4) Check that the average value D04 of the displayed data of page: 3, address: 04 is “FD” to “FF”, “00” or “03”. If outside this range, change the data of page: C, address: 3C, and check again.
   [If D04 is “80” to “FC”]
   Decrease the data of page: C, address: 3C. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
   [If D04 is “04” to “7F”]
   Increase the data of page: C, address: 3C. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
5) Set data: 0F to page: 3, address: 36.
6) Check that the average value D04 of the displayed data of page: 3, address: 04 is “FD” to “FF” or “00” to “03”. If outside this range, change the data of page: C, address: 3D, and check again.
   [If D04 is “80” to “FC”]
   Decrease the data of page: C, address: 3D. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
   [If D04 is “04” to “7F”]
   Increase the data of page: C, address: 3D. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
7) Set data: 00 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
8) Set data: 04 to page: 3, address: 36.
9) Set data: 00 to page: 1, address: 00.

3. AGC Center Level Adjustment (RP-193 Board)

Mode	Recording/playback
Signal	Color bar
Measurement Point	CH1: Pin ⑧ of CN775 (ERRP) CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope Trigger source: CH2
Adjustment Page	C
Adjustment Address	44

Adjusting method:

1) Record color bar signal for two minutes on any tape.
2) Set data: 01 to page: 1, address: 00.
3) Write the following data in page: C, addresses: 40 to 44, 4B, 5A.
   (To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)
   Page: C, address: 40, data: C0
   Page: C, address: 41, data: C0
   Page: C, address: 42, data: 90
   Page: C, address: 43, data: 90
   Page: C, address: 44, data: 86
   Page: C, address: 4B, data: 8E
   Page: C, address: 5A, data: 00
4) Playback the part recorded with the color bar signal.
5) Increase the data of page: C, address: 44, read the data D_1 when the CH1 pulse is set to the whole audio and video areas.
6) Decrease the data of page: C, address: 44, and read the data D_2 when the CH1 pulse is set to the whole audio and video areas.
7) Obtain the average value of D_1 and D_2, and take it as D_3.
8) Set D_3 to page: C, address: 44, and press the PAUSE button of the adjusting remote commander.
9) Set data: 0E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
10) Set data: 84 to page: C, address: 5A, and press the PAUSE button of the adjusting remote commander.
11) Set data: 00 to page: 1, address: 00.
12) After completing the adjusting, perform 5. AEQ Adjustment.


When the CH1 pulse is not set
CH1
(CN775 ⑧
ERRP)
When the CH1 pulse is set to whole audio and video areas
Audio
Video
CH2
(CN775 ⑥
JSWP)
EVENch
ODDch

[Actual Waveform]

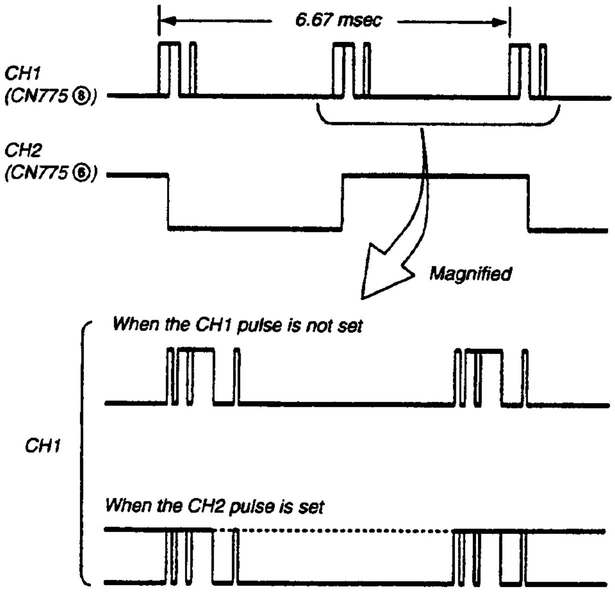

6.67 msec
CH1
(CN775 ⑧)
CH2
(CN775 ⑥)
Magnified
When the CH1 pulse is not set
CH1
When the CH2 pulse is set

Fig. 5-2-7.

4. CLK DELAY Adjustment (RP-193 Board)

Mode	Recording/playback
Signal	Color bar
Measurement Point	CH1: Pin ⑧ of CN775 (ERRP) CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope Trigger source: CH2
Adjustment Page	C
Adjustment Address	47

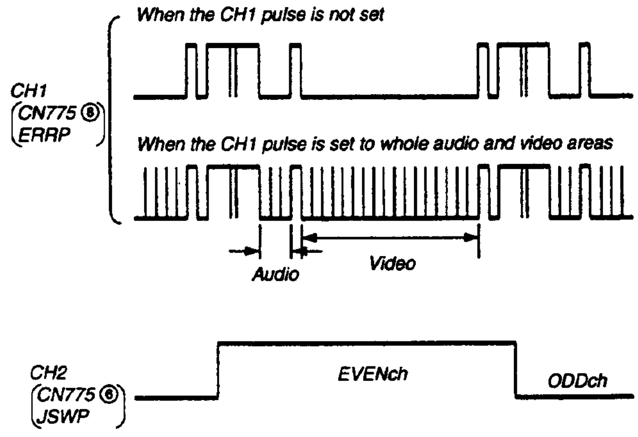
Adjusting method:

1) Record color bar signal for two minutes on any tape.
2) Set data: 01 to page: 1, address: 00.
3) Write the following data in page: C, addresses: 40 to 43, 47, 4B, 5A.

(To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)

Page: C, address: 40, data: C0
Page: C, address: 41, data: C0
Page: C, address: 42, data: 90
Page: C, address: 43, data: 90
Page: C, address: 47, data: C8
Page: C, address: 4B, data: 8E
Page: C, address: 5A, data: 00

4) Playback the part recorded with the color bar.
5) Increase the data of page: C, address: 47, read the data D_1 when the CH1 pulse is set to the whole audio and video areas.
6) Decrease the data of page: C, address: 47, and read the data D_2 when the CH1 pulse is set to the whole audio and video areas.
7) Obtain the average value of D_1 and D_2, and take it as D_3.
8) Set D_3 to page: C, address: 47, and press the PAUSE button of the adjusting remote commander.
9) Set data: 0E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
10) Set data: 84 to page: C, address: 5A, and press the PAUSE button of the adjusting remote commander.
11) Set data: 00 to page: 1, address: 00.
12) After completing the adjusting, perform "5. AEQ Adjustment".


When the CH1 pulse is not set
CH1
(CN775 ⑧
ERRP)
When the CH1 pulse is set to whole audio and video areas
Audio
Video
CH2
(CN775 ⑥
JSWP)
EVENch
ODDch

[Actual Waveform]

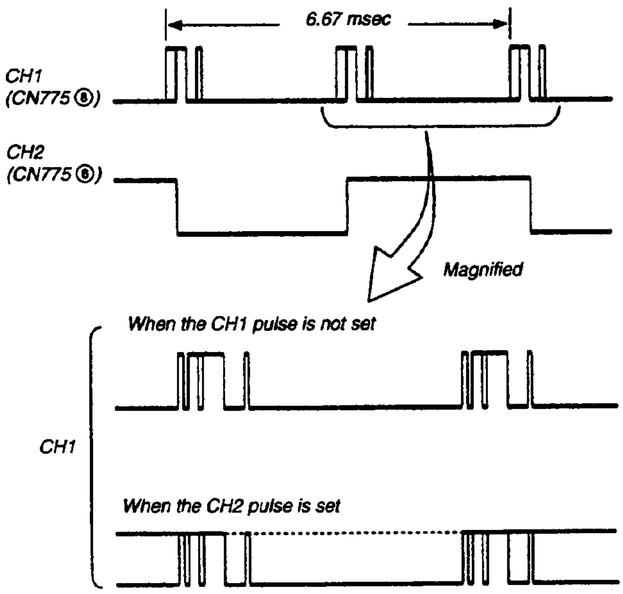

6.67 msec
CH1
(CN775 ⑧)
CH2
(CN775 ⑥)
Magnified
When the CH1 pulse is not set
CH1
When the CH2 pulse is set

Fig. 5-2-8.

5. AEQ Adjustment (RP-193 Board)

Mode	Recording/playback
Signal	Arbitrary
Measurement Point	Pin ① of CN775 (RF MONITOR)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	40, 41, 42, 43, 5A

Note 1: Avoiding the tape top and end, use the stabilized part of the RF output at the tape center.

Note 2: Use a ME tape that is 7µm thick (ex. PDVM-40ME).

Adjusting method:

1) Set data: 01 to page: 1, address: 00.
2) Set data: 8E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
3) Write data in page: C, addresses: 40 to 43, and 5A as shown in the following table.
   (To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)

Address	Data
40	C0
41	C0
42	90
43	90
5A	00

4) Record color bar signal for one minute from the tape top.
5) Rewind the tape, and play back the part recorded.
6) When the RF output stabilizes, set data: 07 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
7) About 20 to 30 seconds after pressing the PAUSE button, check that the data of page: 3, address: 02 changes from "07" to "00".
8) Check that the data of page: 3, address: 03 is the following value.
   When "00" : Normal
   When "01" : EVENch is faulty
   When "02" : ODDch is faulty
   When "03" : EVENch and ODDch are faulty
   Perform the following procedure only when "00" is displayed.
9) Read the data of page: 3, address: 04 to 07, and take the values as D_{04}, D_{05}, D_{06}, and D_{07}.
10) Set D_{04} to page: C, address: 40, and press the PAUSE button of the adjusting remote commander.
11) Set D_{05} to page: C, address: 42, and press the PAUSE button of the adjusting remote commander.
12) Set D_{06} to page: C, address: 41, and press the PAUSE button of the adjusting remote commander.
13) Set D_{07} to page: C, address: 43, and press the PAUSE button of the adjusting remote commander.
14) Set data: 84 to page: C, address: 5A, and press the PAUSE button of the adjusting remote commander.
15) Set data: 0E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
16) Set data: 00 to page: 1, address: 00.

6. PLL Capture Range Adjustment (RP-193 Board)

Mode	Recording/playback
Signal	Color bar
Measurement Point	CH1: Pin ⑧ of CN775 (ERRP) CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope Trigger source: CH2
Adjustment Page	C
Adjustment Address	46

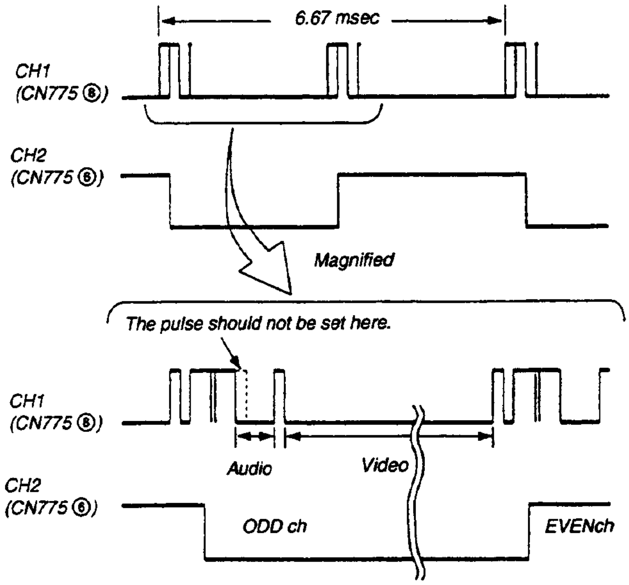


Fig. 5-2-9.

Adjusting method:

1) Record color bar signal for two minutes on any tape.
2) Set data: 01 to page: 1, address: 00.
3) Write the following data in page: C, addresses: 4B and 5A.
   (To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)
   Page: C, address: 4B, data: 8E
   Page: C, address: 5A, data: 00
4) Playback the part recorded with the color bar signal.
5) Set data: 80 to page: C, address: 46, and press the PAUSE button of the adjusting remote commander.
6) Set the data of page: C, address: 46 to "60", and check that the pulse is not set at the audio area head of the ERRP waveform's ODDch of the oscilloscope (CH1).
7) Set the data of page: C, address: 46 to "A0", and check that the pulse is not set at the audio area head of the ERRP waveform's ODDch of the oscilloscope (CH1).
   After confirming steps 6) and 7), proceed to step 12).
8) If the pulse is set in steps 6) and 7), increase the data of page: C, address: 46 from "80", and read the data D_1 when the pulse is set at the audio area head of CH1.
9) Decrease the data of page: C, address: 46 from "80", and read the data D_2 when the pulse is set at the audio area head of CH1.
10) Obtain the average value of D_1 and D_2, and take it as D_3.
11) Set D_3 to page: C, address: 46, and press the PAUSE button of the adjusting remote commander.
12) Set data: 0E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
13) Set data: 84 to page: C, address: 5A, and press the PAUSE button of the adjusting remote commander.
14) Set data: 00 to page: 1, address: 00.

2-5-2. JC-18 Board Adjustments

1. A/D Converter Reference Voltage Adjustment 1 (JC-18 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point	Pin ⑤ of IC013 (CL061)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV001
Specified Value	A=2.83 ± 0.01 Vdc

Adjusting method:
1) Set the VRT voltage (A) to the specified value using RV001.

2. A/D Converter Reference Voltage Adjustment 2 (JC-18 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point	Pin ③ of IC013 (CL062)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV002
Specified Value	A=0.94 ± 0.01 Vdc

Adjusting method:
1) Set the VBT voltage (A) to the specified value using RV002.

3. Y Signal Clamp Reference Voltage Adjustment (JC-18 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ⑧ of IC011 (CL054)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV011
Specified Value	A=1.150 ± 0.005 Vdc

Connection : Connect a jumper wire between Pin ⑥ of IC018 (CL150) and GND.

Adjusting method:
1) Set the Y signal clamp reference voltage (A) to the specified value using RV011.

4. CR Signal Clamp Reference Voltage Adjustment (JC-18 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ⑧ of IC010 (CL052)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV010
Specified Value	A=1.900 ± 0.005 Vdc

Connection : Connect a jumper wire between Pin ⑥ of IC018 (CL150) and GND.

Adjusting method:
1) Set the CR signal clamp reference voltage (A) to the specified value using RV010.

5. CB Signal Clamp Reference Voltage Adjustment (JC-18 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point	Pin ⑧ of IC009 (CL053)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV012
Specified Value	A=1.900 ± 0.005 Vdc

Connection : Connect a jumper wire between Pin ⑥ of IC018 (CL150) and GND.

Adjusting method:
1) Set the CB signal clamp reference voltage (A) to the specified value using RV012.

6. Playback Y Signal Level Adjustment (JC-18 Board)

Mode	E–E
Signal	Color bar
Measurement Point	Pin ⑧ of CN102 (CL113)
Measuring Instrument	Oscilloscope
Adjusting Element	RV301
Specified Value	A=0.43 ± 0.01 V (NTSC) A=0.41 ± 0.01 V (PAL)

Adjusting method:

1) Set data: 01 to page: 1, address: 00.
2) Set data: 15 to page: D, address: 02, and press the PAUSE button of the adjusting remote commander.
3) Set data: 14 to page:D, address: 04, and press the PAUSE button of the adjusting remote commander.
4) Set data: 09 to page: 5, address: 02.
5) Set the Y signal level (A) to the specified value using RV301.
6) Set data: 00 to page: 5, address: 02.
7) Set data: 25 to page: D, address: 02, and press the PAUSE button of the adjusting remote commander.
8) Set data: 10 to page: D, address: 04, and press the PAUSE button of the adjusting remote commander.
9) Set data: 00 to page: 1, address: 00.

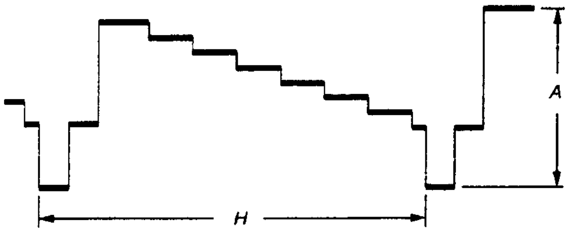


Fig. 5-2-10.

7. Playback CR Signal Level Adjustment (Encoder R-Y Input Level Temporary Adjustment) (JC-18 Board)

Mode	E–E
Signal	Color bar
Measurement Point	Pin ⑩ of CN102 (CL114)
Measuring Instrument	Oscilloscope
Adjusting Element	RV004
Specified Value	A=540 ± 10 mV

Adjusting method:

1) Set data: 01 to page: 1, address: 00.
2) Set data: 15 to page: D, address: 02, and press the PAUSE button of the adjusting remote commander.
3) Set data: 14 to page: D, address: 04, and press the PAUSE button of the adjusting remote commander.
4) Set data: 09 to page: 5, address: 02.
5) Set the CR signal level (A) to the specified value using RV004.
6) Set data: 00 to page: 5, address: 02.
7) Set data: 25 to page: D, address: 02, and press the PAUSE button of the adjusting remote commander.
8) Set data: 10 to page: D, address: 04, and press the PAUSE button of the adjusting remote commander.
9) Set data: 00 to page: 1, address: 00.
10) After the adjustment, be sure to perform general adjustment "Encoder R-Y Input Level Adjustment".

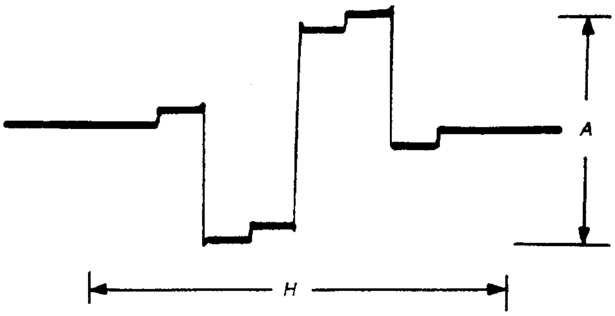


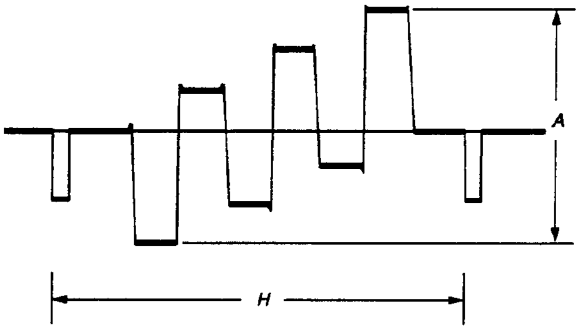
Fig. 5-2-11.

8. Playback CB Signal Level Adjustment (JC-18 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ⑫ of CN102 (CL115)
Measuring Instrument	Oscilloscope
Adjusting Element	RV005
Specified Value	A=390 ± 10 mV

Adjusting method:
1) Set data: 01 to page: 1, address: 00.
2) Set data: 15 to page: D, address: 02, and press the PAUSE button of the adjusting remote commander.
3) Set data: 14 to page: D, address: 04, and press the PAUSE button of the adjusting remote commander.
4) Set data: 09 to page: 5, address: 02.
5) Set the CB signal level (A) to the specified value using RV005.
6) Set data: 00 to page: 5, address: 02.
7) Set data: 25 to page: D, address: 02, and press the PAUSE button of the adjusting remote commander.
8) Set data: 10 to page: D, address: 04, and press the PAUSE button of the adjusting remote commander.
9) Set data: 00 to page: 1, address: 00.

For NTSC model



For PAL model

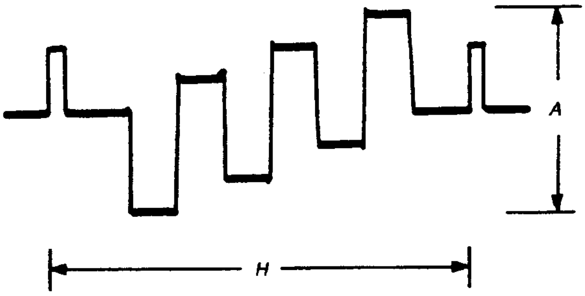


Fig. 5-2-12.

9. CTLG SPCK Adjustment (JC-18 Board)

Mode	Playback
Signal	Arbitrary tape
Measurement Point	Pin ⑦ of IC202 (CL219)
Measuring Instrument	Frequency counter
Adjusting Element	CT401
Specified Value	f=13.5 MHz ± 100 Hz

Adjusting method:
1) Set the CTLG SPCK frequency (f) to the specified value using CT401.

10. AFC Preliminary Adjustment (JC-18 Board)

Mode	Recording
Signal	Color bar
Measurement Point	Pin ⑨ of IC205 (CL214)
Measuring Instrument	Digital voltmeter
Adjusting Element	CT200
Specified Value	A=1.9 ± 0.5 Vdc

Adjusting method:
1) Set the DC voltage (A) to the specified value using CT200.

11. AFC Picture Frame Adjustment (JC-18 Board)

Mode	Recording
Signal	Color bar (Video input)
Measurement Point	CH1: Pin ㉑ of IC017 (CL051) CH2: Pin ㉘ of IC205 (CL222)
Measuring Instrument	Oscilloscope
Adjusting Element	RV200
Specified Value	T=110 ± 10 nsec

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... NORM

Adjusting method:

1) Set the time difference (T) between the H SYNC falling and AFH rising to the specified value using RV200.

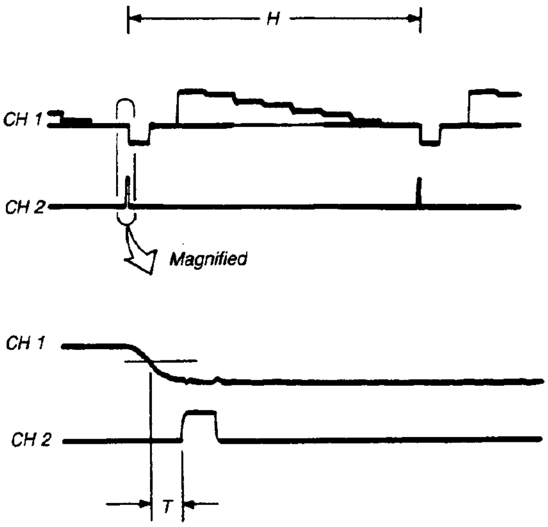


Fig. 5-2-13.

12. AFC Adjustment (JC-18 Board)

Mode	Recording
Signal	Color bar
Measurement Point	Pin ⑨ of IC205 (CL214)
Measuring Instrument	Digital voltmeter
Adjusting Element	CT200
Specified Value	A=1.90 ± 0.05 Vdc

Adjusting method:

1) Set the DC voltage (A) to the specified value using CT200.

2-5-3. YC-144 Board Adjustments

1. Y/C Separation Input Level Check (YC-144 Board)

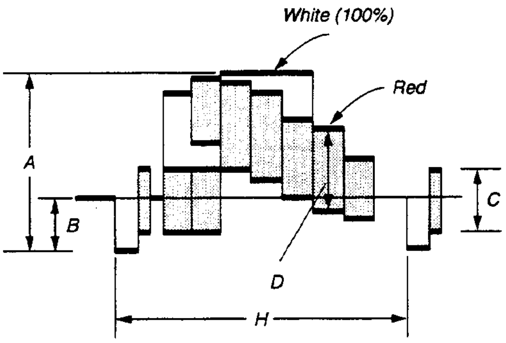
Mode	E–E
Signal	Color bar (VIDEO input)
Measurement Point Measuring Instrument	Pin ⑦ of CN001 (CL207) BW LIMIT: 20 MHz
Specified Value	NTSC model; A=1.00 ± 0.01 V B=286 mV C=286 mVp-p D=670 mVp-p PAL model; A=1.00 ± 0.01 V B=300 mV C=300 mVp-p D=660 mVp-p

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... NORM

Adjusting method:

1) Check that the VIDEO signal level (A) is the specified value.
2) Check that the SYNC signal level (B) is the specified value.
3) Check that the burst signal level (C) is the specified value.
4) Check that the red chroma signal level (D) is the specified value.

For NTSC model



For PAL model

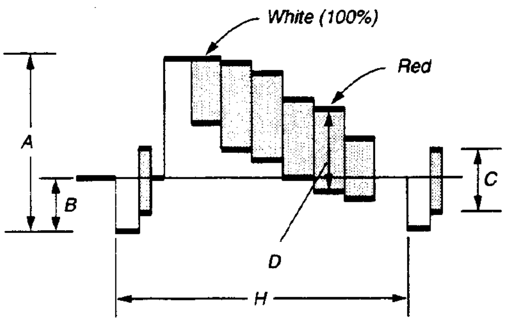


Fig. 5-2-14.

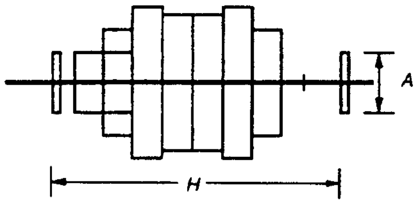
2. Y/C Separation Chroma Level Adjustment (YC-144 Board)

Mode	E–E
Signal	Color bar (VIDEO input)
Measurement Point	Pin ㉒ of CN001 (CL014)
Measuring Instrument	Oscilloscope
Adjusting Element	RV201
Specified Value	A=140 ± 10 mV (NTSC)
	A=140 ± 10 mV (PAL)

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... NORM

Adjusting method:
1) Set the burst signal level (A) to the specified value using RV201.

For NTSC model



For PAL model

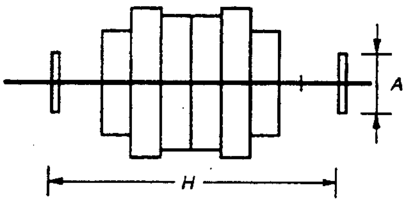


Fig. 5-2-15.

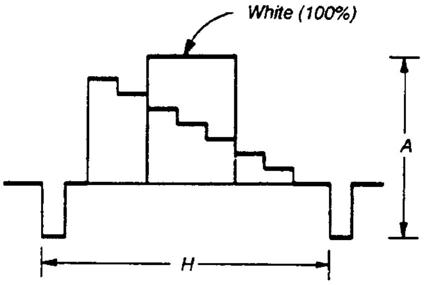
3. Y/C Separation Y Level Check (YC-144 Board)

Mode	E–E
Signal	Color bar (VIDEO input)
Measurement Point	Pin ⑳ of CN001 (CL017)
Measuring Instrument	Oscilloscope
Specified Value	A=1.00 ± 0.01 V

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... NORM

Adjusting method:
1) Check that the Y signal level (A) is the specified value.

For NTSC model



For PAL model

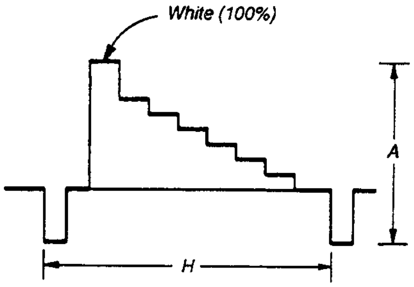


Fig. 5-2-16.

2-5-4. VA-99 Board Adjustments

1. AGC Adjustment (VA-99 Board)

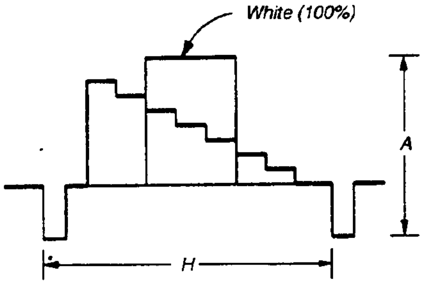
Mode	E-E
Signal	Color bar (S VIDEO input)
Measurement Point	Pin ⑪ of IC003 (CL043)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	48
Specified Value	A=0.50 ± 0.01 V

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... S

Adjusting method:
1) Check that the Y signal level (A) is the specified value.

Adjusting method:
1) Set data: 01 to page: 1, address: 00.
2) Change the data of page:D, address: 48, and adjust the Y signal level (A) to the specified value.
3) Press the PAUSE button of the adjusting remote control unit.
4) Set data: 00 to page: 1, address: 00.

For NTSC model



For PAL model

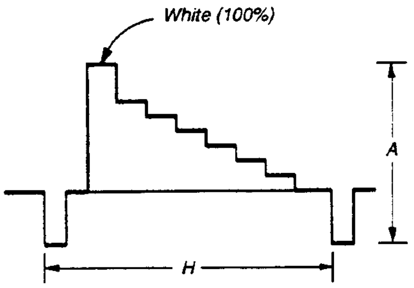


Fig. 5-2-17.

2. Analog E–E Y Signal Output Level Adjustment (VA-99 Board)

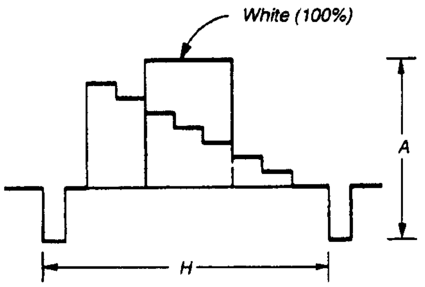
Mode	E-E
Signal	Color bar (S VIDEO input)
Measurement Point	Y signal terminal of S video output terminal (CL159)
Measuring Instrument	Oscilloscope
Adjusting Element	RV014
Specified Value	A=1.00 ± 0.01 V

Note 1 : Terminate the Y signal terminal of the S video output terminal using a 75Ω resistor.
75Ω resistor (Parts code: 1-247-804-11)

Note 2 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... S

Adjusting method:
1) Set the Y signal level (A) to the specified value using RV014.

For NTSC model



For PAL model

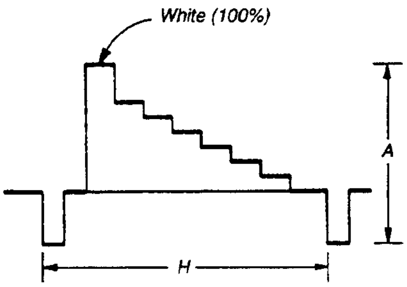


Fig. 5-2-18.

3. Analog E–E Chroma Signal Output Level Adjustment (VA-99 Board)

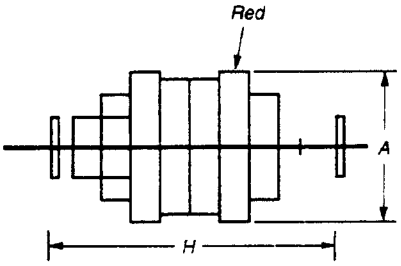
Mode	E–E
Signal	Color bar (S VIDEO input)
Measurement Point	Chroma signal terminal of S video output terminal (CL157)
Measuring Instrument	Oscilloscope
Adjusting Element	RV015
Specified Value	A=670 ± 10 mV (NTSC) A=660 ± 10 mV (PAL)

Note 1 : Terminate the chroma signal terminal of the S video output terminal using a 75 Ω resistor.
75 Ω resistor (Parts code: 1-247-804-11)

Note 2 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... S

Adjusting method:
1) Set the red signal level (A) to the specified value using RV015.

For NTSC model



For PAL model

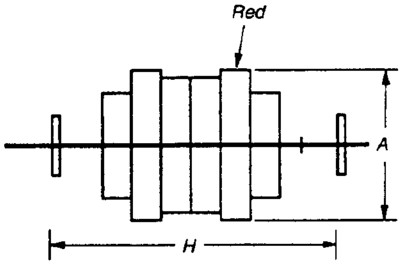


Fig. 5-2-19.

4. Analog E-E VIDEO Signal Output Level Check (VA-99 Board)

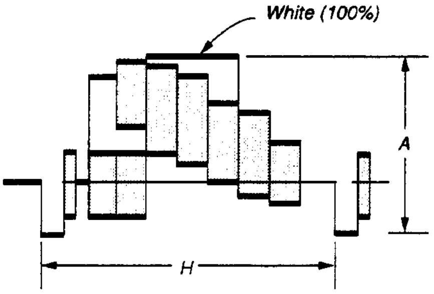
Mode	E–E
Signal	Color bar (S VIDEO input)
Measurement Point	Video output terminal (CL155)
Measuring Instrument	Oscilloscope
Specified Value	A=1.00 ± 0.03 V

Note 1 : Terminate the video output terminal using a 75 Ω resistor.
75 Ω resistor (Parts code: 1-247-804-11)

Note 2 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... S

Adjusting method:
1) Check that the VIDEO signal level (A) is the specified value.

For NTSC model



For PAL model

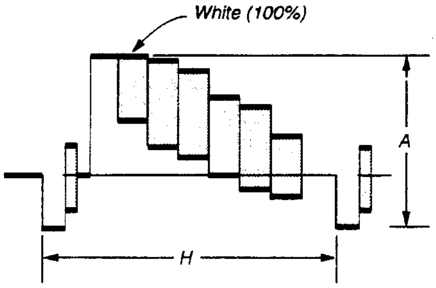


Fig. 5-2-20.

5. Decoder VXO Freerunning Frequency Adjustment (VA-99 Board)

Mode	E-E
Signal	No signal
Measurement Point	Q007 emitter (CL044) or Pin ㉔ of CN003
Measuring Instrument	Frequency counter
Adjustment Page	D
Adjustment Address	4A
Specified Value	f=3579545 ± 30 Hz (NTSC) f=4433619 ± 20 Hz (PAL)

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... S

Adjusting method:
1) Set data: 01 to page: 1, address: 00.
2) Set data: 20 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
3) Turn OFF and then ON the power.
4) Change the data of page: D, address: 4A, and adjust the VXO oscillation frequency (f) to the specified value.
5) Press the PAUSE button of the adjusting remote control unit.
6) Set data: 10 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
7) Set data: 00 to page: 1, address: 00.

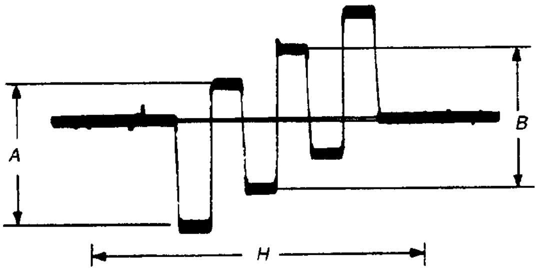
6. Decoder HUE Adjustment (VA-99 Board)

Mode	E-E
Signal	Color bar (S VIDEO input)
Measurement Point	Q021 emitter (CL057) or Pin ③ of CN002
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	49
Specified Value	A-B=0 ± 20 mV (NTSC) A=Minimum (PAL)

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... S

Adjusting method:
1) Set data: 01 to page: 1, address: 00.
2) NTSC model
   Change the data of page: D, address: 49 so that the voltage (A) between the yellow and cyan is egual to the voltage (B) between the green and magenta.
   PAL model
   Change the data of page: D, address: 49 so that the waveform does not appear double.
3) Press the PAUSE button of the adjusting remote control unit.
4) Set data: 00 to page: 1, address: 00.

For NTSC model



For PAL model

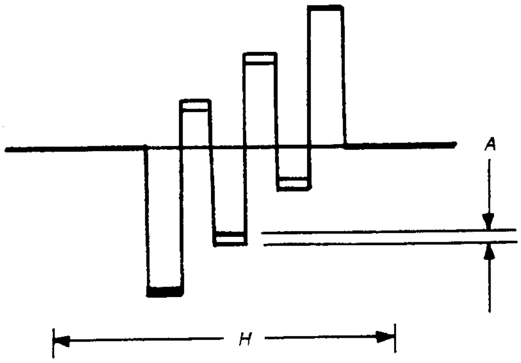


Fig. 5-2-21

7. REC Y Level Adjustment (VA-99 Board)

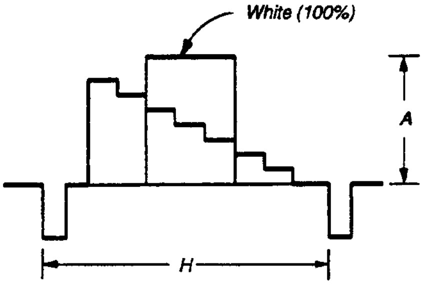
Mode	E–E
Signal	Color bar (S VIDEO input)
Measurement Point	Pin ⑦ of CN002 (CL042)
Measuring Instrument	Oscilloscope
Adjusting Element	RV002
Specified Value	A=1.55 ± 0.02 V

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... S

Adjusting method:

1) Set the Y signal level (A) to the specified value using RV002.

For NTSC model



For PAL model

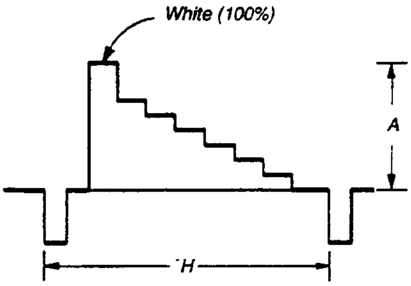


Fig. 5-2-22.

8. REC CR Level Adjustment (VA-99 Board)

Mode	E–E
Signal	Color bar (S VIDEO input)
Measurement Point	Pin ⑤ of CN002 (CL056)
Measuring Instrument	Oscilloscope
Adjusting Element	RV006
Specified Value	A=1.25 ± 0.02 V (NTSC) A=1.20 ± 0.02 V (PAL)

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... S

Adjusting method:

1) Set the CR signal level (A) to the specified value using RV006.

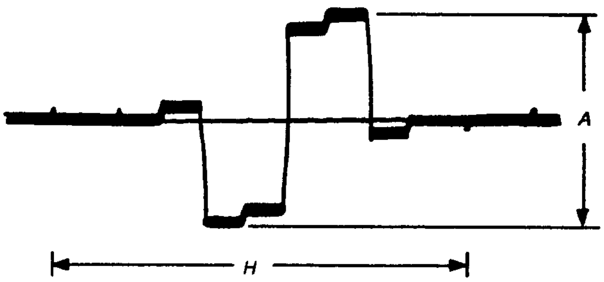


Fig. 5-2-23.

9. REC CB Level Adjustment (VA-99 Board)

Mode	E-E
Signal	Color bar (S VIDEO input)
Measurement Point	Pin ③ of CN002 (CL058)
Measuring Instrument	Oscilloscope
Adjusting Element	RV007
Specified Value	A=1.20 ± 0.02 V

Note 1 : Set to the following at the SET UP menu of the menu screen.
L1 IN VIDEO .... S

Adjusting method:
1) Set the CB signal level (A) to the specified value using RV007.

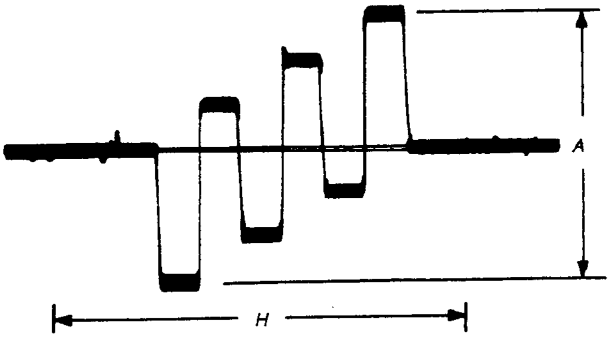


Fig. 5-2-24.

10. NPS 4 fsc Freerunning Frequency Adjustment (VA-99 Board)

Mode	Playback
Signal	Any tape
Measurement Point	Pin ㉖ of IC012 (CL128)
Measuring Instrument	Frequency counter
Adjusting Element	CT001
Specified Value	f=14318180 ± 100 Hz (NTSC) f=17734480 ± 100 Hz (PAL)

Adjusting method:
1) Set the oscillation frequency (f) to the specified value using CT001.

11. Playback Y Level Check (VA-99 Board)

Mode	Playback
Signal	Any recodered tape
Measurement Point	Y signal terminal of S video output terminal (CL159)
Measuring Instrument	Oscilloscope
Specified Value	A=0.83 ± 0.02 V (NTSC) A=0.825 ± 0.02 V (PAL)

Note 1 : Terminate the Y signal terminal of the S video output terminal using a 75 Ω resistor.
75 Ω resistor (Parts code: 1-247-804-11)

Note 2 : Perform this check after confirming that the specified value in the following adjustment of the JC-18 board has been satisfied.
1. Playback Y Signal Level Adjustment

Adjusting method:
1) Set data: 01 to page: 1, address: 00.
2) Set data: 15 to page: D, address: 02, and press the PAUSE button of the adjusting remote control unit.
3) Set data: 14 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
4) Set data: 09 to page: 5, address: 02.
5) Check that the Y signal level (A) satisfies the specified value.
6) Set data: 00 to page: 5, address: 02.
7) Set data: 25 to page: D, address: 02, and press the PAUSE button of the adjusting remote control unit.
8) Set data: 10 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
9) Set data: 00 to page: 1, address: 00.

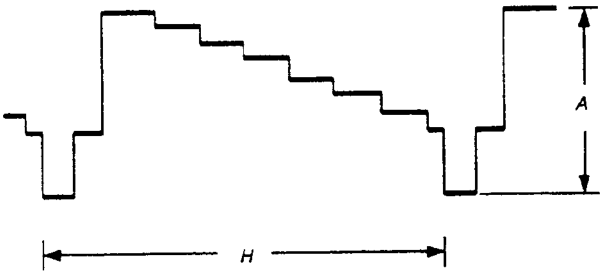


Fig. 5-2-25.

12. Playback Chroma Level Adjustment (VA-99 Board)

Mode	Playback
Signal	Any recoded tape
Measurement Point	Chroma signal terminal of S video output terminal (CL157)
Measuring Instrument	Oscilloscope
Adjusting Element	RV009
Specified Value	A=670 ± 10 mV (NTSC) A=660 ± 10 mV (PAL)

Note 1 : Terminate the chroma signal terminal of the S video output terminal using a 75 Ω resistor.
75 Ω resistor (Parts code: 1-247-804-11)

Note 2 : Perform this adjustment after confirming that the specified value in the following adjustment of the JC-18 board has been satisfied.
1. Playback CR Signal Level Adjustment
2. Playback CB Signal Level Adjustment

Adjusting method:
1) Set data: 01 to page: 1, address: 00.
2) Set data: 15 to page: D, address: 02, and press the PAUSE button of the adjusting remote control unit.
3) Set data: 14 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
4) Set data: 09 to page: 5, address: 02.
5) Set the red signal level (A) to the specified value using RV009.
6) Set data: 00 to page: 5, address: 02.
7) Set data: 25 to page: D, address: 02, and press the PAUSE button of the adjusting remote control unit.
8) Set data: 10 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
9) Set data: 00 to page: 1, address: 00.

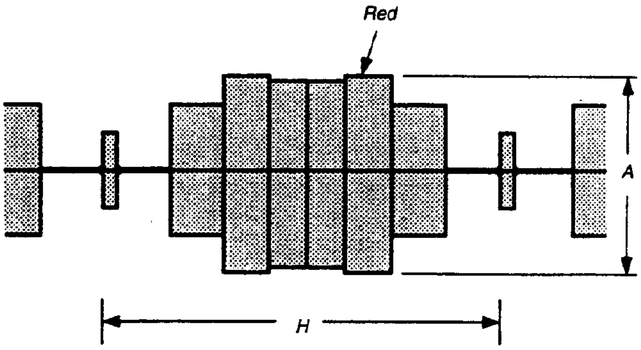


Fig. 5-2-26.

13. Playback Burst Level Adjustment (VA-99 Board) (PAL model only)

Mode	Playback
Signal	Any recoded tape
Measurement Point	Chroma signal terminal of S video output terminal (CL157)
Measuring Instrument	Oscilloscope
Adjusting Element	RV013
Specified Value	A=300 ± 10 mV (PAL)

Note 1 : Terminate the chroma signal terminal of the S video output terminal using a 75 Ω resistor.
75 Ω resistor (Parts code:1-247-804-11)

Note 2 : Perform this adjustment after confirming that the specified value in the following adjustment of the JC-18 board has been satisfied.
1. Playback CR Signal Level Adjustment
2. Playback CB Signal Level Adjustment

Adjusting method:
1) Set data: 01 to page: 1, address: 00.
2) Set data: 15 to page: D, address: 02, and press the PAUSE button of the adjusting remote control unit.
3) Set data: 14 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
4) Set data: 09 to page: 5, address: 02.
5) Set the burst signal level (A) to the specified value using RV013.
6) Set data: 00 to page: 5, address: 02.
7) Set data: 25 to page: D, address: 02, and press the PAUSE button of the adjusting remote control unit.
8) Set data: 10 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
9) Set data: 00 to page: 1, address: 00.

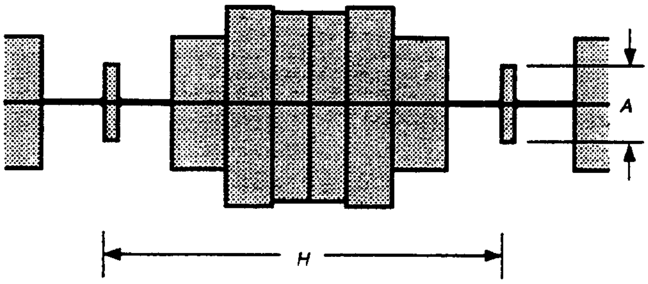


Fig. 5-2-27.

2-5-5. General Adjustments

1. Encoder R-Y Input Level Adjustment (JC-18 Board)

Mode	E–E
Signal	Color bar
Measurement Point	Video output terminal
Measuring Instrument	Vectorscope
Adjusting Element	RV004
Specified Value	Phase : 104 ± 2° Gain : 95 ± 2 %

Adjusting method:

1) Set data: 01 to page: 1, address: 00.
2) Set data: 15 to page: D, address: 02, and press the PAUSE button of the adjusting remote control unit.
3) Set data: 14 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
4) Set data: 09 to page: 5, address: 02.
5) Adjust the burst luminance point to the specified position using the PHASE and GAIN knobs of the vectorscope.
6) Set the red luminance point inside the specified range (range enclosed in the thick line) using RV004.
7) Set data: 00 to page: 5, address: 02.
8) Set data: 25 to page: D, address: 02, and press the PAUSE button of the adjusting remote control unit.
9) Set data: 10 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
10) Set data: 00 to page: 1, address: 00.

For NTSC model

⊞ : FOR ENCODER R-Y INPUT LEVEL ADJUSTMENT
⊞ : FOR DECODER HUE INPUT ADJUSTMENT

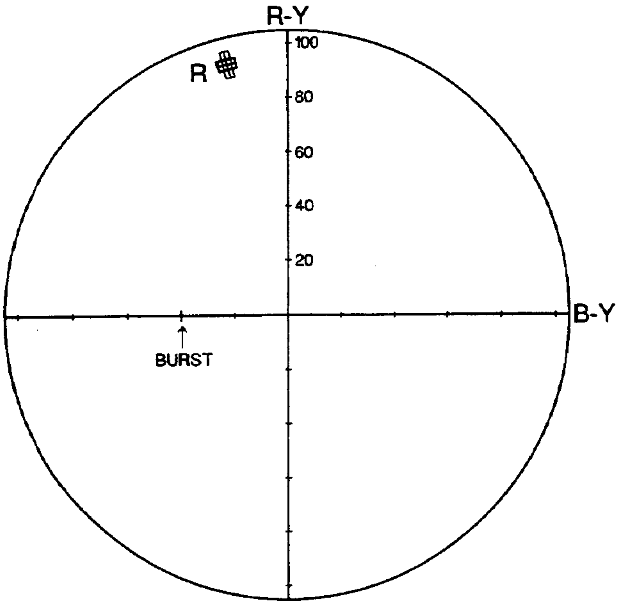


Fig. 5-2-28.

2. Decoder HUE Input Adjustment (JC-18 Board)

Mode	E–E
Signal	Color bar (S Video input)
Measurement Point	Video output terminal
Measuring Instrument	Vectorscope
Adjustment Page	D
Adjustment Address	49
Specified Value	Phase : 104 ± 1° Gain : 95 ± 5 %

Adjusting method:

1) Set data: 01 to page: 1, address: 00.
2) Set data: 15 to page: D, address: 02, and press the PAUSE button of the adjusting remote control unit.
3) Set data: 14 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
4) Set data: 00 to page: 5, address: 02.
5) Adjust the burst luminance point to the specified position using the PHASE and GAIN knobs of the vectorscope.
6) Change the data of page: D, address: 49, and set the red luminance point inside the specified range (range enclosed in the thin line).
7) Press the PAUSE button of the adjusting remote control unit.
8) Set data: 25 to page:D, address: 02, and press the PAUSE button of the adjusting remote control unit.
9) Set data: 10 to page: D, address: 04, and press the PAUSE button of the adjusting remote control unit.
10) Set data: 00 to page: 1, address: 00.

For PAL model

⊞ : FOR ENCODER R-Y INPUT LEVEL ADJUSTMENT
⊞ : FOR DECODER HUE INPUT ADJUSTMENT

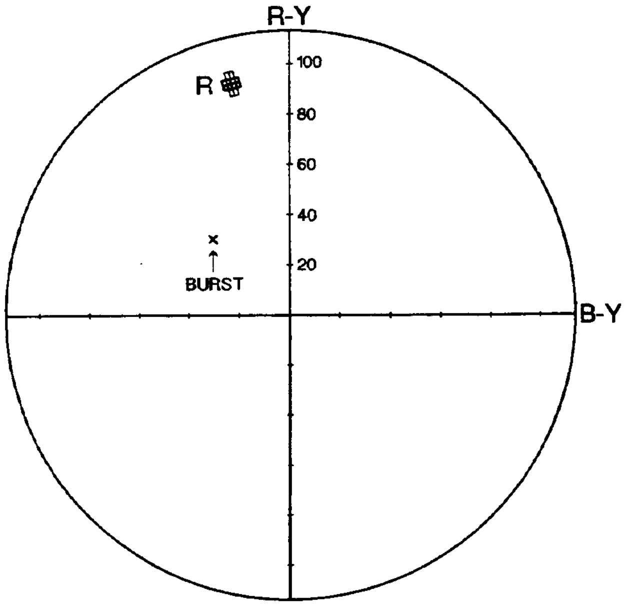


Fig. 5-2-29.

2-6. AUDIO SYSTEM ADJUSTMENTS

Unless specified otherwise, set the switches as follows.

AUDIO MODE (Menu display)	16 (bit)
L1 IN VIDEO	NORM
AUDIO MONITOR (Tray)	STEREO 1
AUDIO MIX BALANCE	Center Click
REC BALANCE	Center Click
REC LEVEL	Center Click

Note : Set AUDIO MODE and L1 IN VIDEO at the SET UP menu of the menu screen.

[Connection of Equipment]

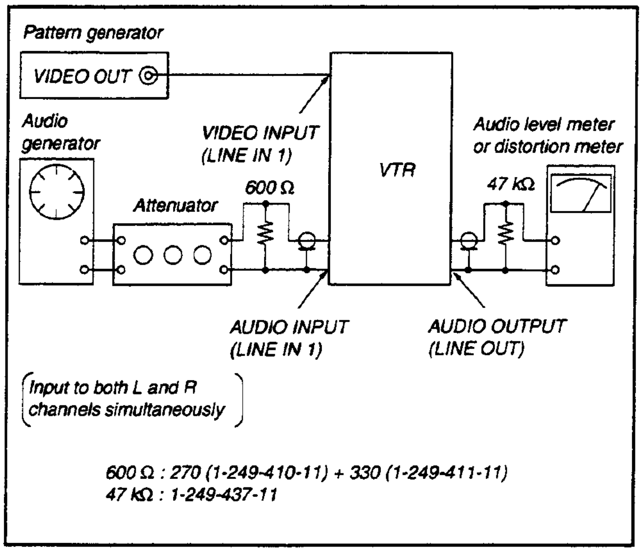


Fig. 5-2-30.

1. Playback Level/indicator Check

Mode	Playback
Signal	Audio check reference tape
Measurement Point	Audio output terminal (Left and right)
Measuring Instrument	Audio level meter and frequency counter
Specified Value	① 32 kHz mode: The 1 kHz signal should be output. 48 kHz mode: The 1 kHz signal level should be +6 ± 2 dBv (+8.2 ± 2 dBs) 44.1 kHz mode EMP ON: The 7.35 kHz signal level is −6 ± 2 dB for the 1 kHz signal level in the 48 KHz mode 44.1 kHz mode EMP OFF: The 7.35 kHz signal level is 0 ± 1 dB for the 1 kHz signal level in the 48 kHz mode ② NS AUDIO lamp shold be lit.

Note : 0 dBv=1 Vrms
0 dBs=0.775 Vrms

Checking method:
1) Check that the playback signal level satisfies the specified value.
2) Check thta the NS AUDIO lamp (Front panel) is lit.

2. E–E Level Check

Mode	E–E (LINE 1 input)
Signal	Audio: 1 kHz , − 6 dBv (−3.8 dBs) signal, Audio input terminal (Left and right)
	Video: Color bar signal, Video input terminal
Measurement Point	Audio output terminal (Left and right)
Measuring Instrument	Audio level meter
Specified Value	−6 ± 3 dBv (−3.8 ± 3 dBs)

Checking method:
1) Check that the 1 kHz signal level satisfies the specified value.
2) Check that the number in the segment of the level meter (fluorescent display tube) that is lit is between 8 and 10 for both the L and R channels.

3. Recording/Playback Check (Audio Lock Mode)

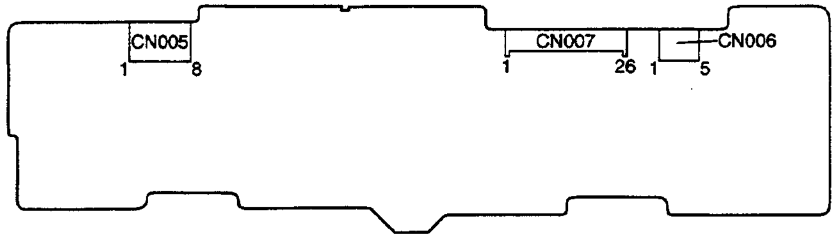
Mode	Recording/playback (LINE 1 input)
Signal	Audio: no signal
	Video: Color bar Video input terminal
Measurement Point	Display data of page:4, address:40 of the adjusting remote commander
Measuring Instrument	
Specified Value	① After playback pause, the changes in the data after 5 frames have been sent continuously must be in the following order. "54"→"56"→"56"→"56"→"56"→"54" (NTSC) "58"→"58"→"58"→"58"→"58"→"58" (PAL) ② NS AUDIO lamp shold be lit.

Note 1: Check that the AUDIO MODE (menu screen) is 16 (bits).
Note 2: Send the frames using the JOG dial. (1 click=1 frame)

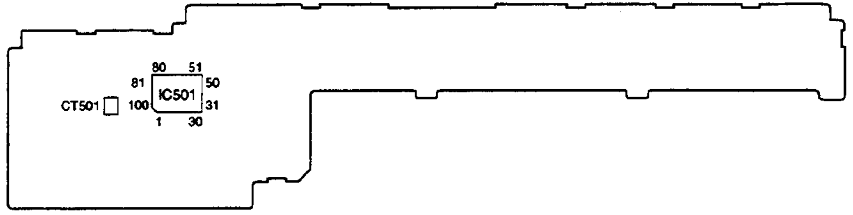
Checking method:
1) With no audio signal being input, record the color bar signal for about 1 minute.
2) Playback the recorded part, and set the playback pause mode.
3) Select page:4, address:40 using the adjusting remote commander.
4) Send the frames, so that the display data for page:4, address:40 is 54. (NTSC)
5) Send 5 frames continuously, and check that the display data of page:4, address:40 changes in the order specified.
6) Exit the playback pause mode, playback the recorded part, and check that the NS AUDIO lamp (front panel) is off.

2-7. ARRANGEMENT DIAGRAM FOR ADJUSTMENT PARTS

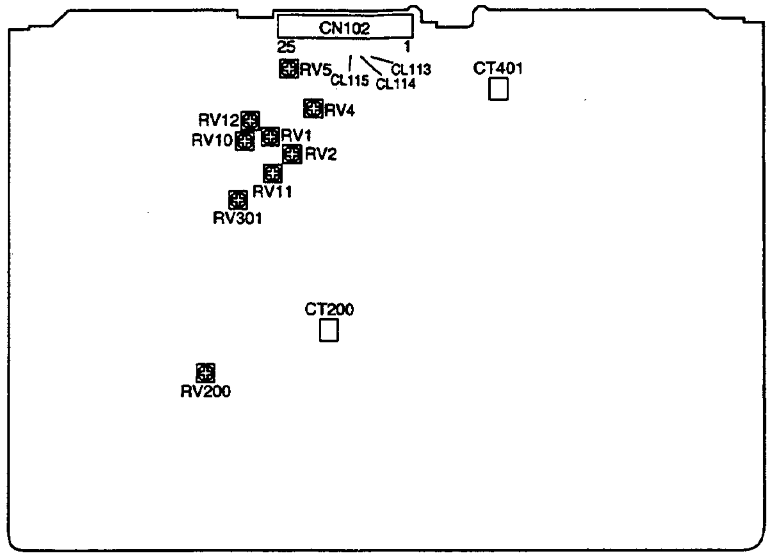
PS-348/395 BOARD (SIDE A)


CN005
1
8
CN007
1
26
1
5
CN006

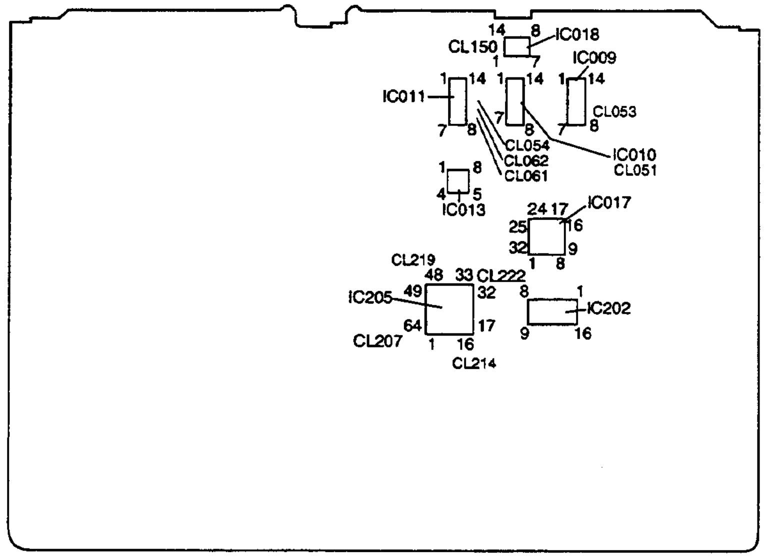
FM-26 BOARD (SIDE A)


80
51
81
50
IC501
CT501
100
31
1
30

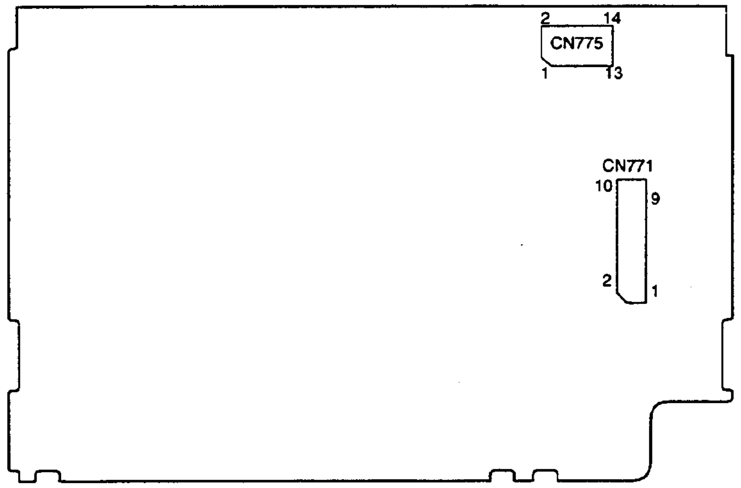
JC-18 BOARD (SIDE A)


CN102
25
1
RV5
CL115
CL113
CL114
CT401
RV4
RV12
RV10
RV1
RV2
RV11
RV301
CT200
RV200

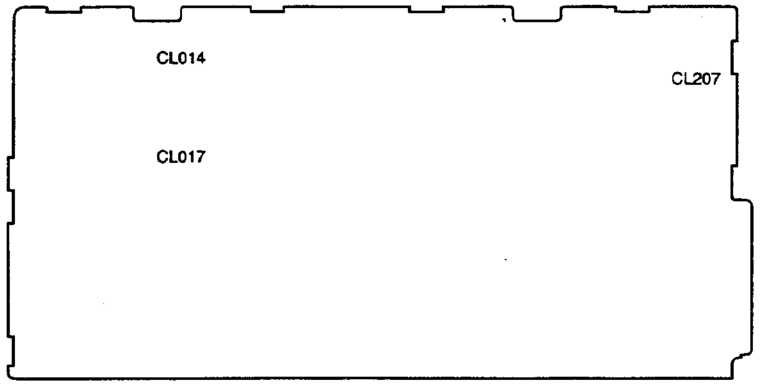
JC-18 BOARD (SIDE B)


14
8
IC018
CL150
1
7
IC009
1
14
1
14
1
14
IC011
CL053
7
8
7
8
7
8
CL054
IC010
CL062
CL051
CL061
1
8
4
5
IC013
24 17
IC017
25
16
32
9
1
8
CL219
48
33
CL222
IC205
49
32
8
1
IC202
64
17
9
16
CL207
1
16
CL214

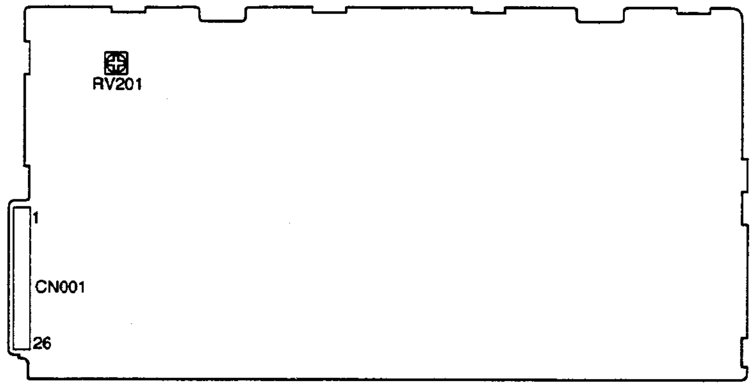
RP-193 BOARD (SIDE A)


2
14
CN775
1
13
CN771
10
9
2
1

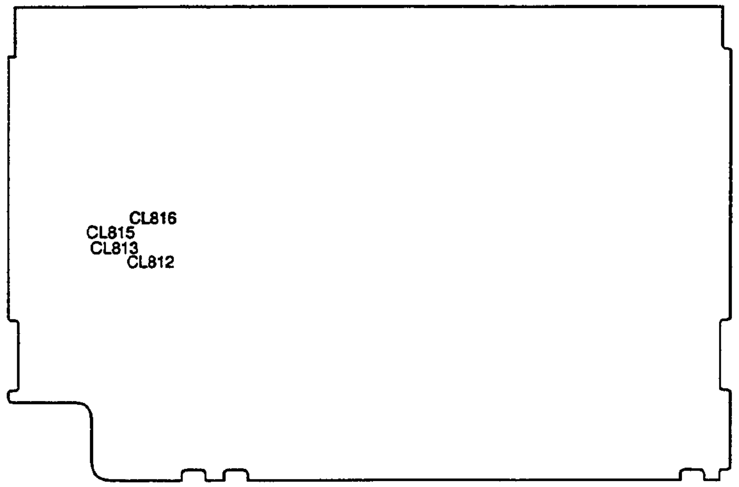
YC144 BOARD (SIDE A)


CL014
CL207
CL017

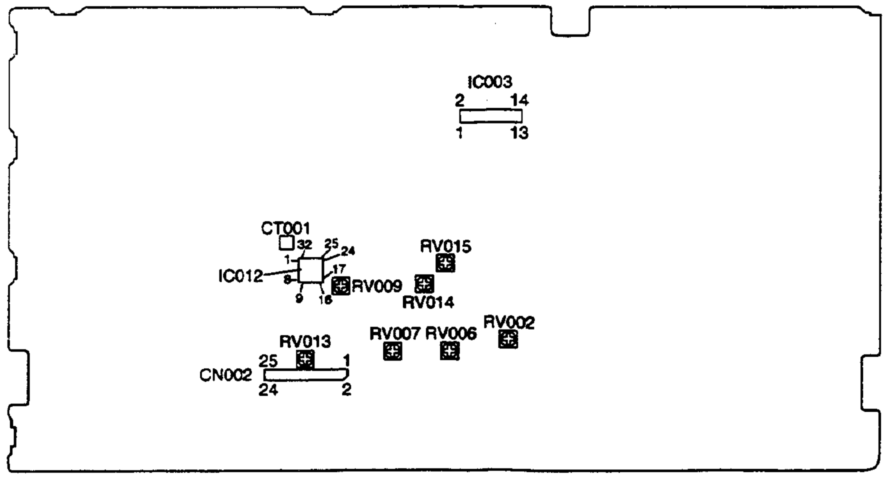
YC144 BOARD (SIDE B)


RV201
1
CN001
26

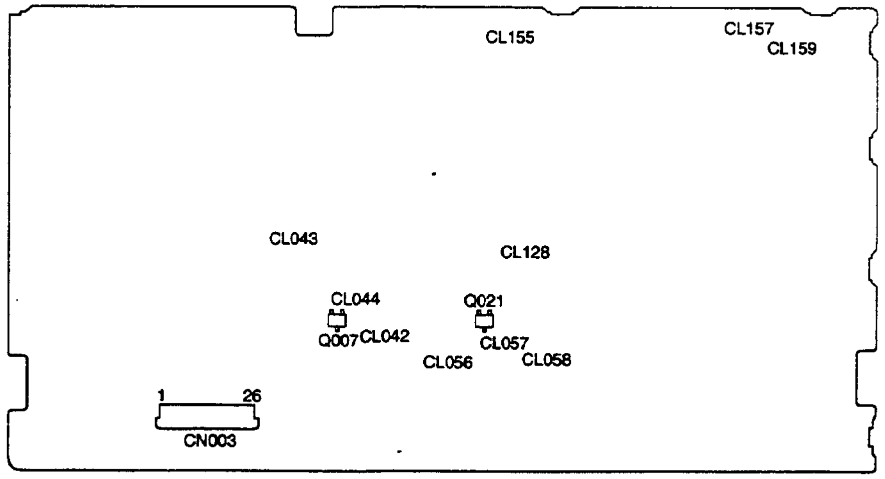
RP-193 BOARD (SIDE B)


CL816
CL815
CL813
CL812

VA-99 BOARD (SIDE A)


IC003
2
14
1
13
CT001
32
25
24
1
RV015
IC012
8
17
RV009
9
16
RV014
RV002
RV013
RV007
RV006
25
1
CN002
24
2

VA-99 BOARD (SIDE B)


CL155
CL157
CL159
CL043
CL128
CL044
Q021
Q007
CL042
CL057
CL056
CL058
1
26
CN003

5-3. SERVICE MODE

3-1. ADJUSTING REMOTE COMMANDER

The adjusting remote commander is used for changing the calculation coefficient in signal processing, EVR data, etc. The adjusting remote commander performs bi-directional communication with the unit using the remote commander signal line (LANC). The resultant data of this bi-directional communication is written in the non-volatile memory.

1) Connect the adjusting remote commander to the remote (LANC) terminal.
2) Set as follows at the SET UP menu of the menu screen.
   LANC MODE .... S
3) Adjust the HOLD switch of the adjusting remote commander to "HOLD" (SERVICE position).

If it has been properly connected, the LCD on the adjusting remote commander will display as shown in Fig. 5-3-1.

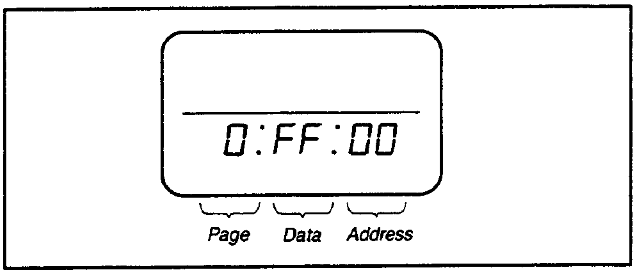


Fig. 5-3-1.

4) Operate the adjusting remote commander as follows.
   - Changing the page
     The page increases when the EDIT SEARCH+ button is pressed, and decreases when the EDIT SEARCH– button is pressed. There are altogether 16 pages, from 0 to F.

Hexadecimal notation	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
LCD Display	0	1	2	3	4	5	6	7	8	9	A	b	c	d	E	F
Decimal notation conversion value	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Table 5-3-1.

   - Changing the address
     The address increases when the FF (▶▶) button is pressed, and decreases when the REW (◀◀) button is pressed. There are altogether 256 addresses, from 00 to FF.
   - Changing the data (Data setting)
     The data increases when the PLAY (▶) button is pressed, and decreases when the STOP (■) button is pressed.
     There are altogether 256 data, from 00 to FF.
   - Writing the adjustment data
     The PAUSE button must be pressed to write the adjustment data (C page, D page and E page) in the nonvolatile memory. (The new adjustment data will not be recorded in the nonvolatile memory if this step is not performed.)

2. Precautions upon using the adjusting remote commander

Mishandling of the adjusting remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

3-2. DATA PROCESSING

The calculation of the adjusting remote commander display data (hexadecimal notation) are required for obtaining the adjustment data of some adjustment items. In this case, after converting the hexadecimal notation to decimal notation, calculate and convert the result to hexadecimal notation, and use it as the adjustment data. Table 5-3-2. indicates the hexadecimal notation-the decimal notation calculation table.

Hexadecimimal notation-Decimal notation

The lower digits of the hexadecimal notation The upper digits of the hexadecimal notation	0	1	2	3	4	5	6	7	8	9	A (A)	B (b)	C (c)	②↓ D (d)	E (E)	F (F)
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A (A)	160	161	162	163	104	165	166	167	168	109	170	171	172	173	174	175
①→ B (b)	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C (c)	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D (d)	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E (E)	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F (F)	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

Note: ( ) indicate the adjusting remote control unit display.

(Example) In the case that the adjusting remote control unit display are BD (bd).
As the upper digit of the hexadecimal notation is B (b), and the lower digit is D (d), the intersection "189" of the ① and ② in the above table is the decimal notation to be calculated. conversion table

Table 5-3-2.

3-3. SERVICE MODE

1. Emergence Memory Address

Page C	Addersses 30 to 3B

Address	Contents
30	EMG code when first error occurs
32	Upper: MSW code when shift starts when first error occurs Lower: MSW code when first error occurs
33	Lower: MSW code to be moved when first error occurs
34	EMG code when second error occurs
36	Upper: MSW code when shift starts when second error occurs Lower: MSW code when second error occurs
37	Lower: MSW code to be moved when second error occurs
38	EMG code when last error occurs
3A	Upper: MSW code when shift starts when last error occurs Lower: MSW code when last error occurs
3B	Lower: MSW code to be moved when last error occurs

When no error occurs in the unit, data 00 is written in the above addresses (30-to 3B). When the first error occurs in the unit, the data corresponding to the error is written in the first emergency address (30 to 33). In the same way, when the second error occurs, the data corresponding to the error is written in the second emergency address (34 to 37).

Finally, when the last error occurs, the data corresponding to the error is written in the last emergency address (38 to 3B). Consequently, addresses 38 to 3B are updated each time errors occur.

Note 1: After completing adjustments, be sure to rewrite the data of addresses 30 to 3B to 00.

1) Set data: 01 to page: 1, address: 00.
2) Set data: 00 to page: C, address: 30, and press the PAUSE button of the adjusting remote commander.
3) Set data: 00 to page: C, address: 31, and press the PAUSE button of the adjusting remote commander.
4) Set data: 00 to page: C, address: 32, and press the PAUSE button of the adjusting remote commander.
5) Set data: 00 to page: C, address: 33, and press the PAUSE button of the adjusting remote commander.
6) Set data: 00 to page: C, address: 34, and press the PAUSE button of the adjusting remote commander.
7) Set data: 00 to page: C, address: 35 and press the PAUSE button of the adjusting remote commander.
8) Set data: 00 to page: C, address: 36 and press the PAUSE button of the adjusting remote commander.
9 Set data: 00 to page: C, address: 37 and press the PAUSE button of the adjusting remote commander.
10) Set data: 00 to page: C, address: 38, and press the PAUSE button of the adjusting remote commander.
11) Set data: 00 to page: C, address: 39, and press the PAUSE button of the adjusting remote commander.
12) Set data: 00 to page: C, address: 3A, and press the PAUSE button of the adjusting remote commander.
13) Set data: 00 to page: C, address: 3B, and press the PAUSE button of the adjusting remote commander.
14) Set data: 00 to page: 1, address: 00, and press the PAUSE button of the adjusting remote commander.

1-1. EMG Code (Emergency Code)

Codes corresponding to the errors which occur are written in addresses 30, 34, 38. The type of error indicated by the code are shown in the following table.

Code	Error Type
00	No error (Initial state)
10	Loading motor time-out during LOAD
11	Loading motor time-out during UNLOAD
20	Reel motor error
22	T reel error
23	S reel error
24	Swing error
32	Error during normal capstan rotation
33	Cassette compartment LOAD error
35	Cassette compartment UNLOAD error
40	FG error during drum start-up
42	FG error during normal drum rotation
50	DEW detection
52	Wet DEW detection
60	Electrical tension regulator error

SECTION 6
REPAIR PARTS LIST

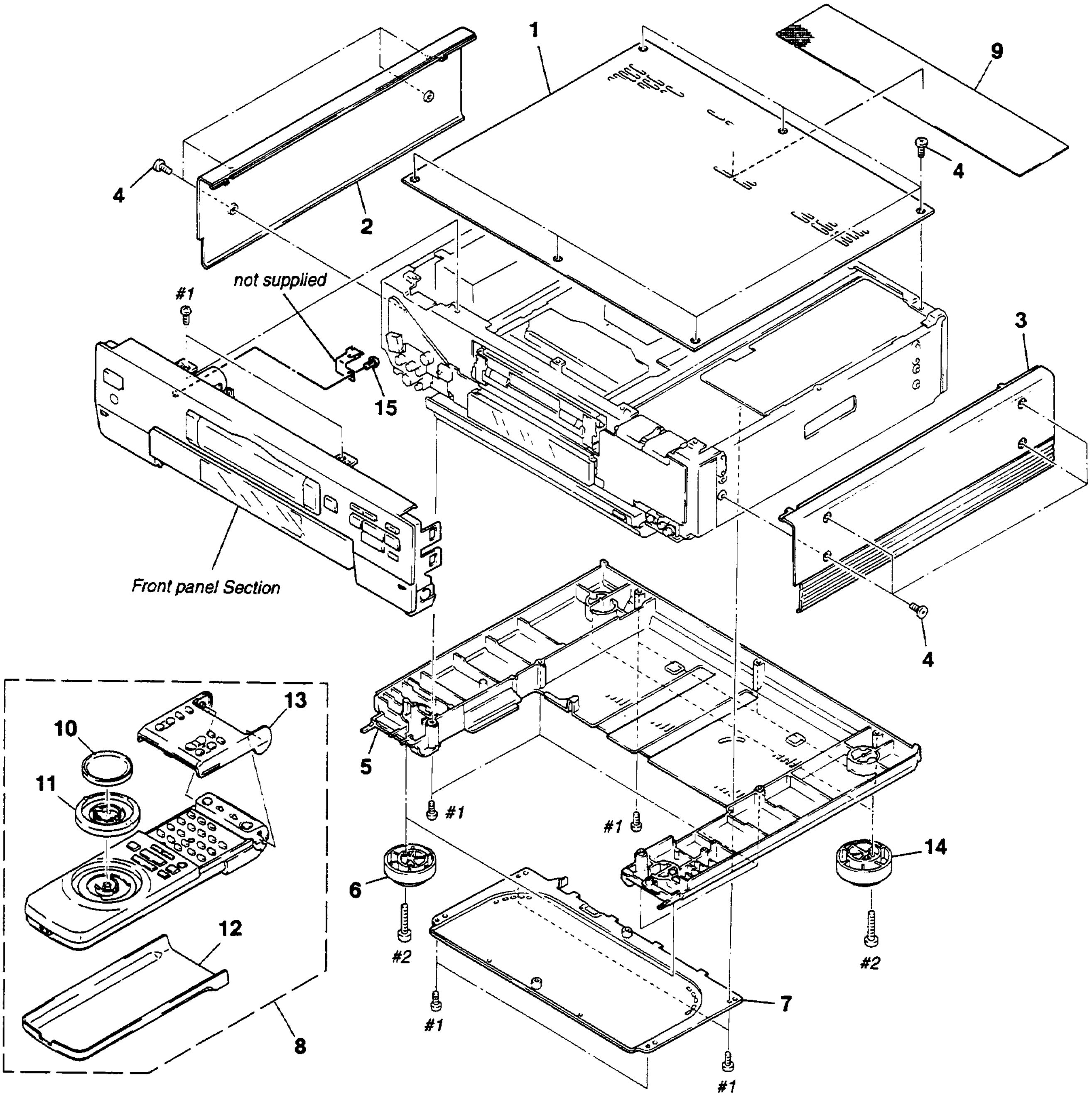
6-1. EXPLODED VIEWS

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

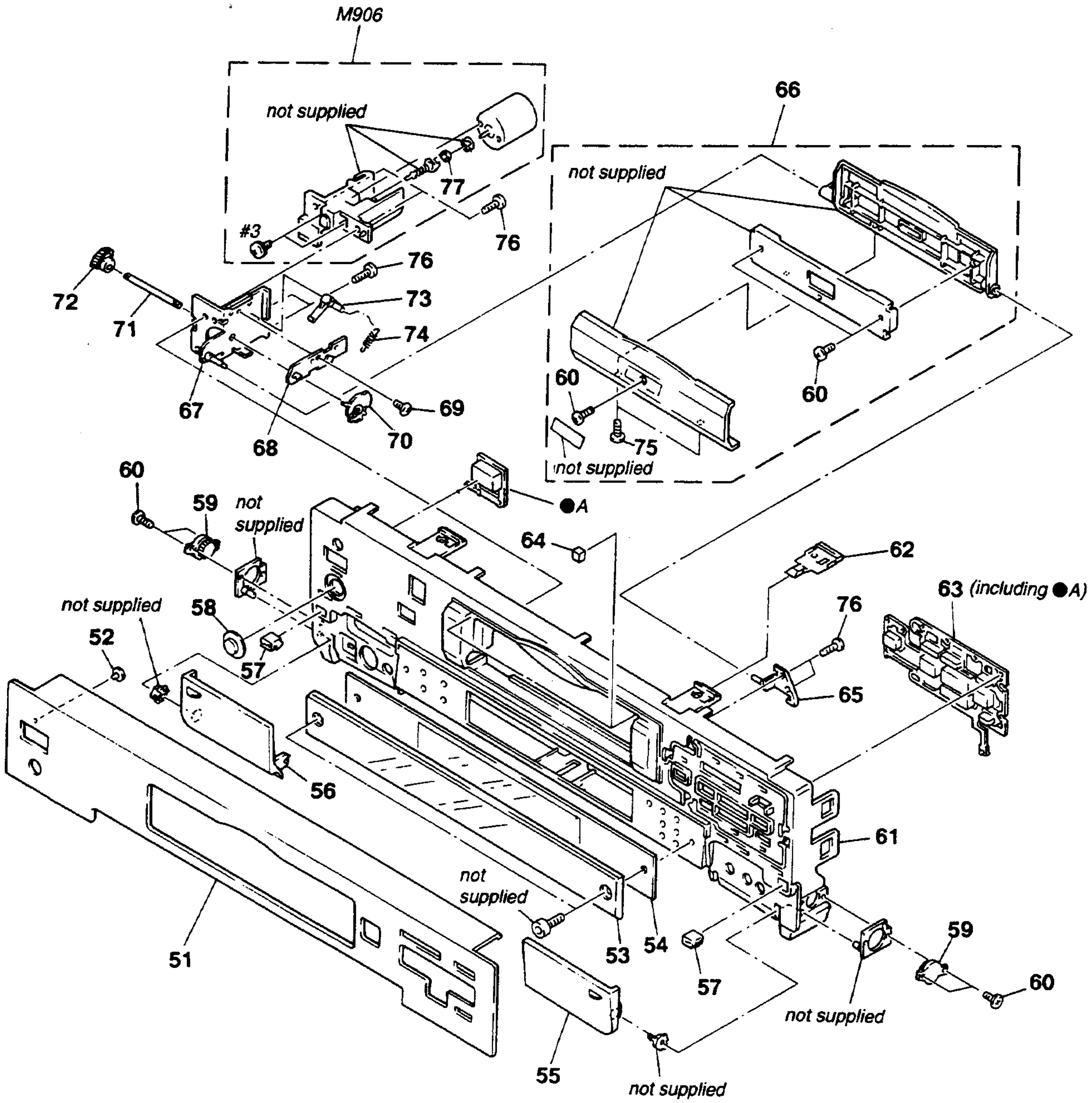
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1-1. OVERALL SECTION



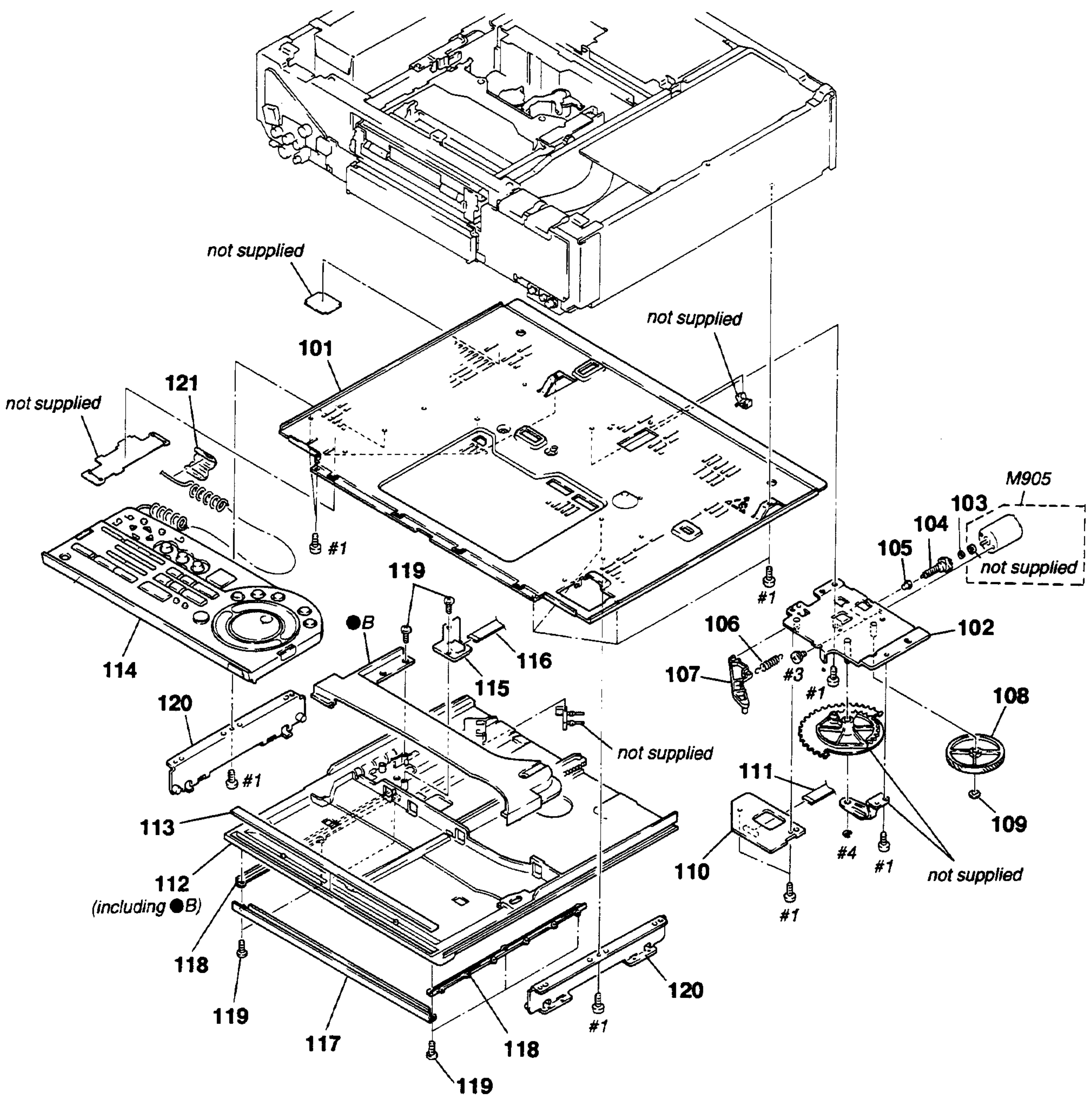
Ref. No.	Part No.	Description	Remark
* 1	3-602-169-21	PLATE, TOP	
2	3-602-103-21	PANEL (L), SIDE	
3	3-602-104-21	PANEL (R), SIDE	
4	3-322-449-11	SCREW, +B3X6	
5	3-602-157-01	CABINET, BOTTOM	
6	X-3945-872-1	FOOT ASSY	
7	X-3602-101-1	STAY ASSY	
8	1-475-020-21	REMOTE COMMANDER (RMT-DS30)	
* 9	3-971-231-01	SHEET, TOP PLATE	
10	3-955-359-61	DIAL, JOG	
11	3-955-358-01	RING, SHUTTLE	
12	3-709-048-31	COVER, REMOTE CONTROL SLIDE	
13	3-709-172-01	COVER	
14	X-3947-154-1	FOOT ASSY	
15	3-970-907-01	SCREW (3X3)	

6-1-2. FRONT PANEL SECTION


M906
not supplied
77
76
#3
66
not supplied
72
71
76
73
74
67
68
70
69
60
60
75
not supplied
60
59
not supplied
●A
64
62
63 (including ●A)
76
65
not supplied
58
52
57
56
61
not supplied
51
53
54
57
59
60
55
not supplied
not supplied

Ref. No.	Part No.	Description	Remark
51	X-3946-988-1	PLATE (D) ASSY, FRONT ORNAMENTAL (DSR-30P)	
51	X-3947-293-1	PLATE (D) ASSY, ORNAMENTAL (DSR-30)	
52	4-969-325-11	LENS, LED	
53	3-602-130-01	PLATE, FROSTED	
54	3-602-131-31	PLATE, FRONT INDICATION (DSR-30)	
54	3-602-131-41	PLATE, FRONT INDICATION (DSR-30P)	
55	X-3946-986-1	DOOR (RD) ASSY, (J)(DSR-30)	
55	X-3946-989-1	DOOR (RD) ASSY, (J)(DSR-30P)	
56	X-3946-985-1	DOOR (LD) ASSY, (J)	
57	3-950-280-01	MAGNET	
58	3-602-144-01	WINDOW, RAY-CATCHER	
59	3-319-224-31	DAMPER, SMALL	
60	3-948-339-01	SCREW, TAPPING	
61	3-602-132-31	PANEL, FRONT	
62	3-602-128-01	SPRING, LEAF, F (DSR-30P)	
63	3-602-133-31	BUTTON, FUNCTION	
* 64	3-968-678-01	RUBBER, C	
65	X-3602-103-1	PLATE (R) ASSY, FIXED	
66	X-3946-987-1	DOOR (D) ASSY, (C)	
67	X-3602-109-1	PLATE ASSY, FULCRUM, C DOOR	
* 68	A-7072-610-A	SW-274 (C) BOARD, COMPLETE	
69	3-732-817-01	SCREW (2X4.5), TAPPING	
70	3-602-137-01	GEAR, C DOOR DRIVING	
71	3-602-140-01	SHAFT, C JOINT	
72	3-602-138-01	WHEEL, C DOOR WORM	
73	3-602-139-01	LEVER, C LOCK	
74	3-602-141-01	SPRING (L SPRING), TENSION	
75	3-948-339-31	SCREW, TAPPING	
76	4-921-277-01	SCREW (B2.6X8), TAPPING, BIND	
77	3-956-686-01	RUBBER, JOINT	
M906	A-7083-063-A	MOTOR BLOCK ASSY, C (C DOOR)	

6-1-3. BOTTOM PLATE BLOCK SECTION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109
112
(including ●B)
110
#4
#1
not supplied
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118
120
119
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117
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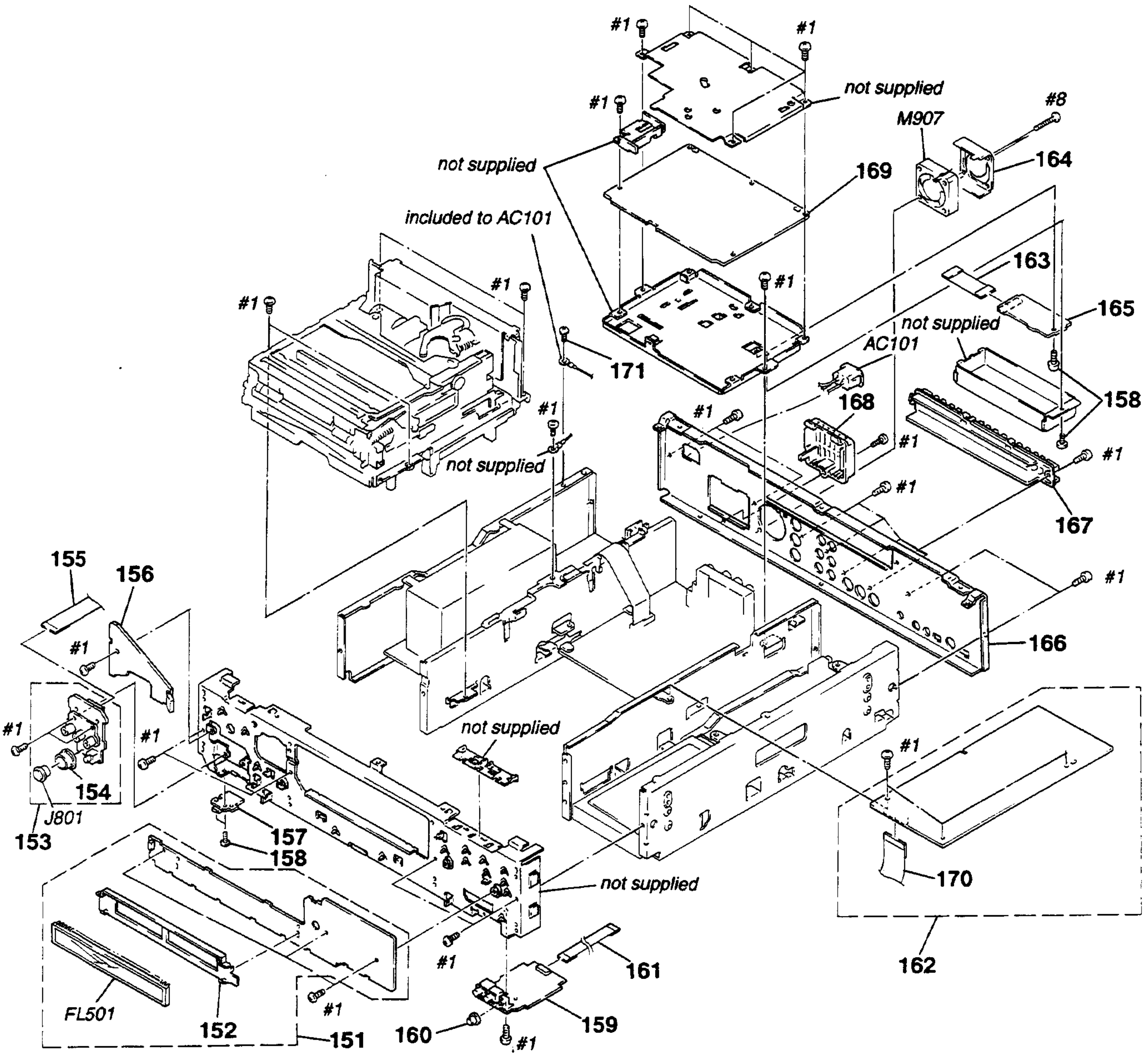
119

Note : When the peripheral parts (gear etc.) of No. 102 Tdriving chassis assembly and the tray (Main) are installed, the Phase adjustment is needed.

Ref. No.	Part No.	Description	Remark
101	3-602-168-01	PLATE, BOTTOM	
102	X-3602-113-1	CHASSIS ASSY, T DRIVING	
103	3-956-686-01	RUBBER, JOINT	
104	3-736-100-01	GEAR (FL), WORM	
105	3-716-144-02	RETAINER, WORM	
106	3-955-833-01	SPRING, TENSION (LOCK ARM)	
107	3-955-924-01	ARM, LOCK	
108	3-955-925-01	GEAR, HELICAL	
109	3-696-510-01	WASHER (3), STOPPER	
* 110	A-7072-628-A	TK-37 (C) BOARD, COMPLETE (DSR-30P)	
* 110	A-7072-981-A	TK-42 BOARD, COMPLETE (DSR-30)	
111	1-776-157-11	CABLE, FLAT (FVT-3K) 15P	
112	3-602-145-01	TRAY (MAIN)	
113	3-602-148-01	SHEET, BLIND	
114	1-759-142-41	CONTROLLER	
* 115	A-7072-629-A	CN-93 (C) BOARD, COMPLETE (DSR-30P)	
* 115	A-7072-980-A	CN-105 BOARD, COMPLETE (DSR-30)	
116	1-776-163-11	CABLE, FLAT (FTC-2) 8P	
* 117	3-602-147-01	REINFORCEMENT (H), T	
* 118	3-602-146-01	REINFORCEMENT (V), T	
119	4-921-277-01	SCREW (B2.6X8), TAPPING, BIND	
120	X-3602-110-1	PLATE ASSY, FULCRUM, T	
121	1-543-793-11	FILTER, CLAMP (FERRITE CORE)	
M905	X-3602-112-1	MOTOR ASSY, T (TRAY)	

6-1-4. CHASSIS ASSEMBLY (1)



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#1
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J801
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158
not supplied
170
162
161
#1
FL501
152
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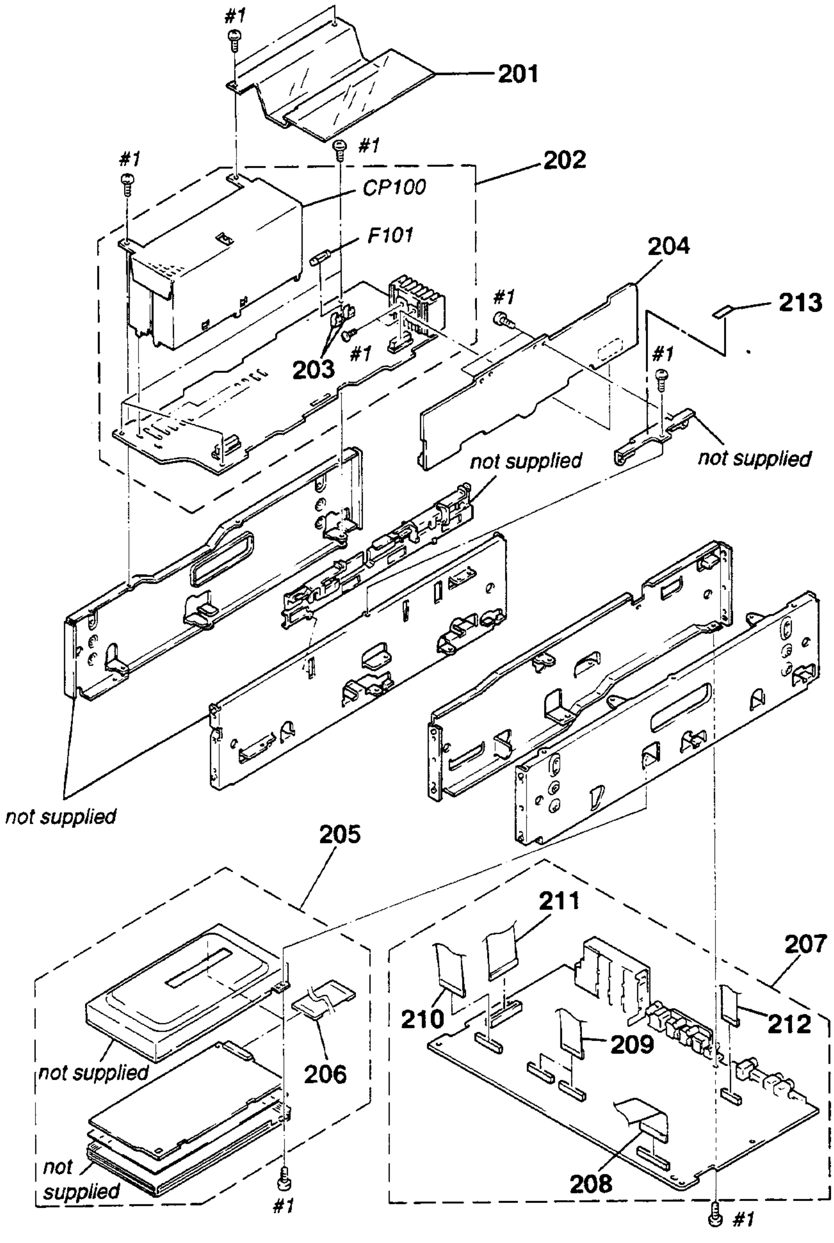
151
160
#1
159

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 151	A-7066-953-A	FM-26 (H) BOARD, COMPLETE (DSR-30)	
* 151	A-7066-957-A	FM-26 (I) BOARD, COMPLETE (DSR-30P)	
* 152	3-602-165-01	HOLDER, INDICATION TUBE	
* 153	A-7072-606-A	FJ-19 (C) BOARD, COMPLETE	
* 154	3-947-530-01	HOLDER, TERMINAL, S	
155	1-776-156-11	CABLE, FLAT (FVF-3J) 17P	
* 156	A-7072-449-A	FL-69 BOARD, COMPLETE (DSR-30)	
* 156	A-7072-607-A	FL-69 (C) BOARD, COMPLETE (DSR-30P)	
* 157	A-7072-630-A	IN-51 (C) BOARD, COMPLETE	
158	3-732-817-01	SCREW (2X4.5), TAPPING	
* 159	A-7072-608-A	HP-91 (C) BOARD, COMPLETE	
160	3-956-685-01	KNOB, VOLUME	
161	1-776-160-11	CABLE, FLAT (FVH-1) 11P	
* 162	A-7066-922-A	TB-30 (G) BOARD, COMPLETE	
163	1-776-854-11	CABLE, FLAT (FJD-1) 17P	
* 164	3-971-226-01	COVER, FAN	
* 165	A-7072-984-A	DF-12 BOARD, COMPLETE (DSR-30)	
* 165	A-7073-018-A	DF-12 (I) BOARD, COMPLETE (DSR-30P)	
* 166	3-602-105-71	FRAME, REAR (DSR-30)	
* 166	3-602-105-81	FRAME, REAR (DSR-30P)	
167	3-602-113-01	COVER (L), VENTILATION	
168	3-602-112-01	COVER (S), VENTILATION	
* 169	A-7066-925-A	JC-18 (G) BOARD, COMPLETE (DSR-30)	
* 169	A-7066-955-A	JC-18 (I) BOARD, COMPLETE (DSR-30P)	
170	1-776-161-11	CABLE, FLAT (FFH-18) 25P	
171	3-975-291-01	SCREW (4X6)	
⚠AC101	1-957-614-11	HARNESS (AC-215)	
FL501	1-517-485-11	TUBE, FLUORESCENT INDICATOR	
J801	1-566-850-31	CONNECTOR, (S) TERMINAL 4P	
M907	1-698-534-31	FAN, DC	

6-1-5. CHASSIS ASSEMBLY (2)



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209
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206
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supplied
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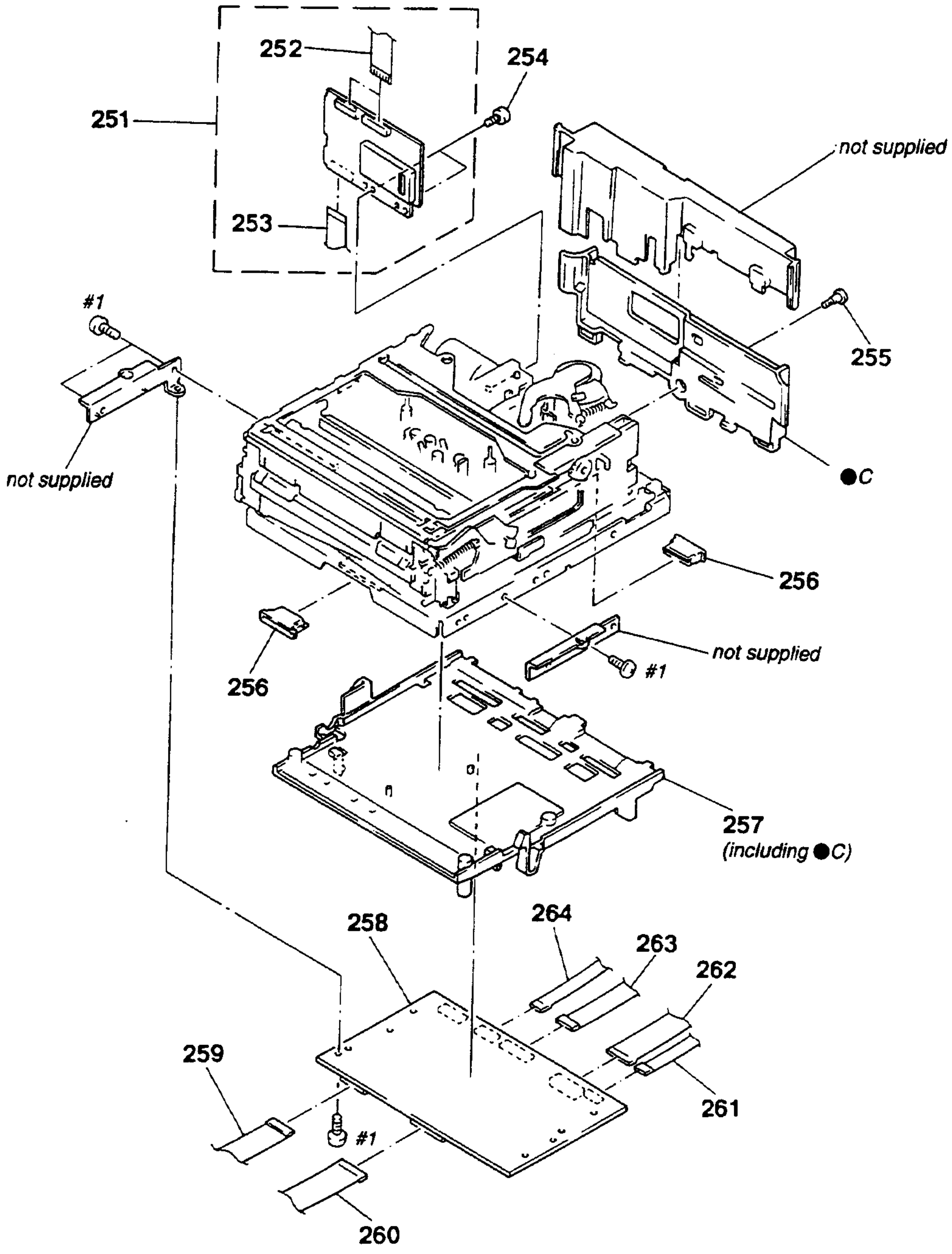
208
#1

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
201	3-602-170-01	INSULATOR, PS	
* 202	A-7073-014-A	PS-394 (H) BOARD, COMPLETE (DSR-30)	
* 202	A-7073-016-A	PS-347 (I) BOARD, COMPLETE (DSR-30P)	
203	1-533-183-11	HOLDER, FUSE	
* 204	A-7073-015-A	PS-395 (H) BOARD, COMPLETE (DSR-30)	
* 204	A-7073-017-A	PS-348 (I) BOARD, COMPLETE (DSR-30P)	
* 205	A-7066-783-A	YC-144 (C) BOARD, COMPLETE (DSR-30P)	
* 205	A-7066-923-A	YC-144 (G) BOARD, COMPLETE (DSR-30)	
206	1-776-159-11	CABLE, FLAT (FVY-1) 26P	
* 207	A-7066-952-A	VA-99 (H) BOARD, COMPLETE (DSR-30)	
* 207	A-7066-956-A	VA-99 (I) BOARD, COMPLETE (DSR-30P)	

Ref. No.	Part No.	Description	Remark
208	1-776-158-11	CABLE, FLAT (FVF-4M) 30P	
209	1-776-152-11	CABLE, FLAT (FVJ-1) 25P	
210	1-776-153-11	CABLE, FLAT (FVJ-4) 25P	
211	1-776-154-11	CABLE, FLAT (FVP-1) 26P	
212	1-776-155-11	CABLE, FLAT (FVT-2B) 17P	
213	3-953-175-01	LABEL (LARGE) (PLAIN),ID	
⚠CP100	1-468-108-11	POWER BLOCK (DSR-30P)	
⚠CP100	1-468-087-12	POWER BLOCK (DSR-30)	
⚠F101	1-532-203-00	FUSE, TIME-LAG (250V, 2A)(DSR-30P)	
⚠F101	1-532-743-11	FUSE, GLASS TUBE (125V, 2A)(DSR-30)	

6-1-6. MD BLOCK ASSEMBLY



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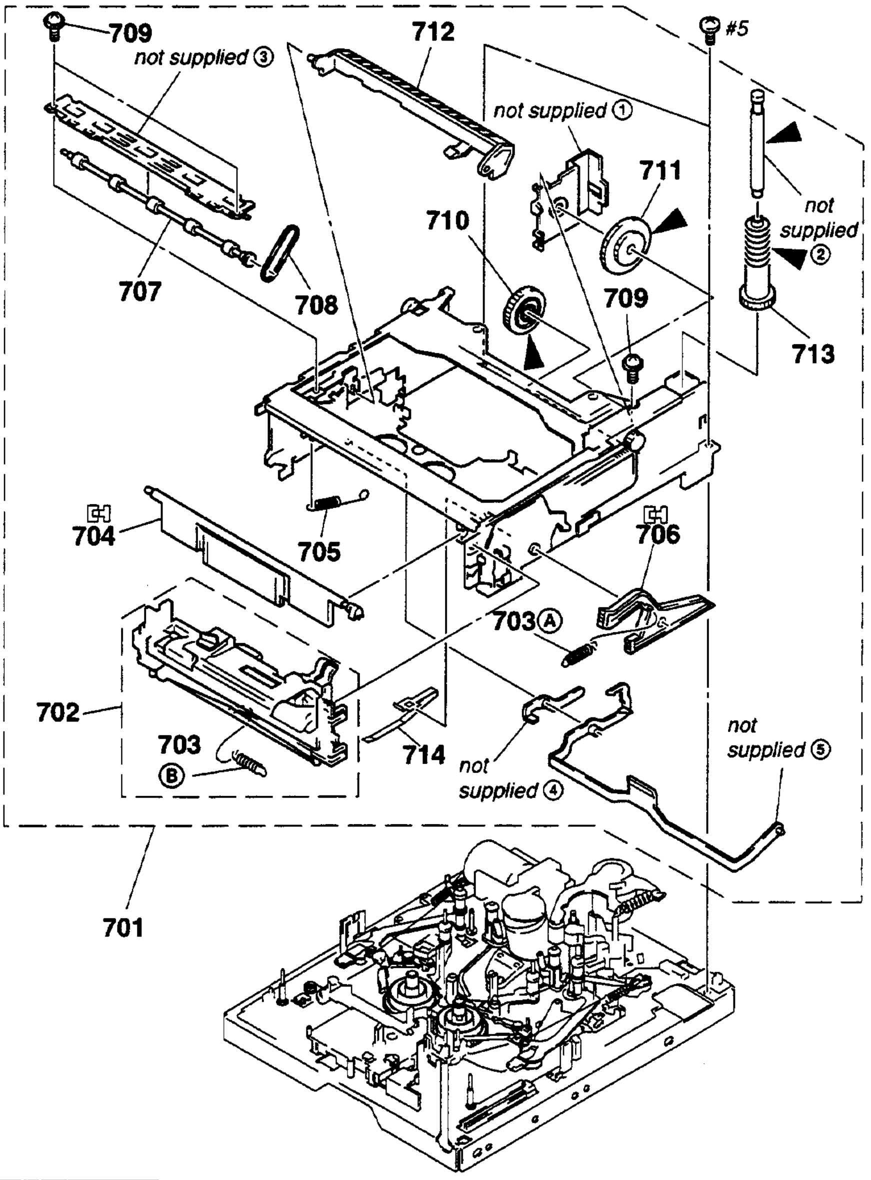
Ref. No.	Part No.	Description	Remark
* 251	A-7066-708-A	RP-193 BOARD, COMPLETE	
252	1-776-150-11	CABLE, FLEXIBLE FLAT 30P	
253	1-776-149-11	CABLE, FLEXIBLE FLAT 30P	
254	3-732-817-01	SCREW (2X4.5), TAPPING	
255	3-741-948-01	SCREW (3), SPECIAL (+) TAPPING	
256	1-764-137-11	CONNECTOR, TRANSLATION 15P	
* 257	3-602-158-01	FRAME, MD	
* 258	A-7066-920-A	CM-49 (G) BOARD, COMPLETE (DSR-30)	
* 258	A-7066-954-A	CM-49 (I) BOARD, COMPLETE (DSR-30P)	
259	1-776-145-11	CABLE, FLAT (FCM-8) 16P	
260	1-776-148-11	CABLE, FLAT (FCM-11) 15P	
261	1-776-146-11	CABLE, FLAT (FCM-9) 9P	
262	1-776-147-11	CABLE, FLAT (FCM-10) 15P	
263	1-776-151-11	CABLE, FLAT (FCM-12) 14P	
264	1-776-162-11	CABLE, FLAT (FVC-2) 8P	

6-1-7. FL CASSETTE COMPARTMENT ASSEMBLY

NOTE FOR INSTALLATION

▶ : Place for grease (SG-055G : 7-651-000-09).

⊡ : Take note of the position and specified direction.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714
not supplied ④
not supplied ⑤
701

not supplied	Ref. Page No.
①	Page 5-40
②	Page 5-40
③	Page 5-38
④	Page 5-41
⑤	Page 5-41

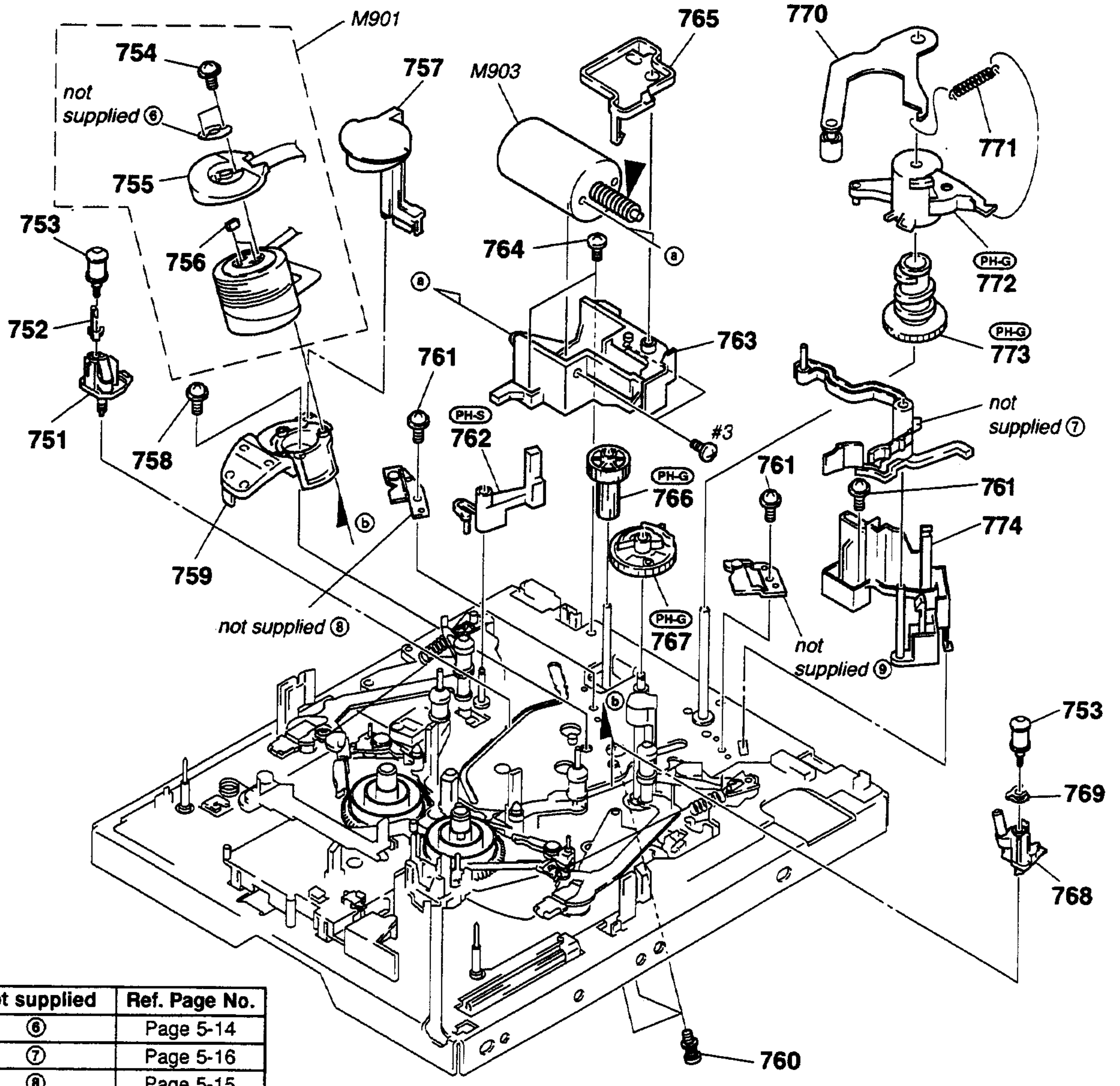
Ref. No.	Part No.	Description	Ref. Page No.
* 701	A-7092-644-A	FL BLOCK ASSY	(5-2)
702	A-7092-647-A	SLOAT BLOCK ASSY, C	(5-41)
703	3-967-604-01	SPRING (DB), TENSION	(Ⓐ:5-40/Ⓑ:5-41)
704	3-967-655-01	DOOR, C	(5-40)
705	3-967-613-01	SPRING (HS), TENSION COIL	(5-41)
706	3-967-777-01	ARM, DAMPER	(5-40)
707	X-3945-780-1	SHAFT ASSY, ROLLER	(5-38)
708	3-967-816-01	BELT, ROLLER	(5-38)
709	3-947-503-01	SCREW (M1.4X2.5)	
710	3-967-591-01	GEAR (B)	(5-40)
711	3-967-590-01	GEAR (A)	(5-40)
712	3-967-653-01	OPENER, LID	(5-39)
713	3-967-592-01	WORM, C	(5-40)
714	3-967-636-01	SPRING, SHIFT PLATE	(5-41)

6-1-8. MECHANISM CHASSIS ASSEMBLY (1)
(TOP SIDE VIEW (1))

NOTE FOR INSTALLATION

(PH-) : Phase adjustment

► : Place for grease (SG-055G : 7-651-000-09).



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774
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759
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PH-G
767
not supplied ⑨
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753
769
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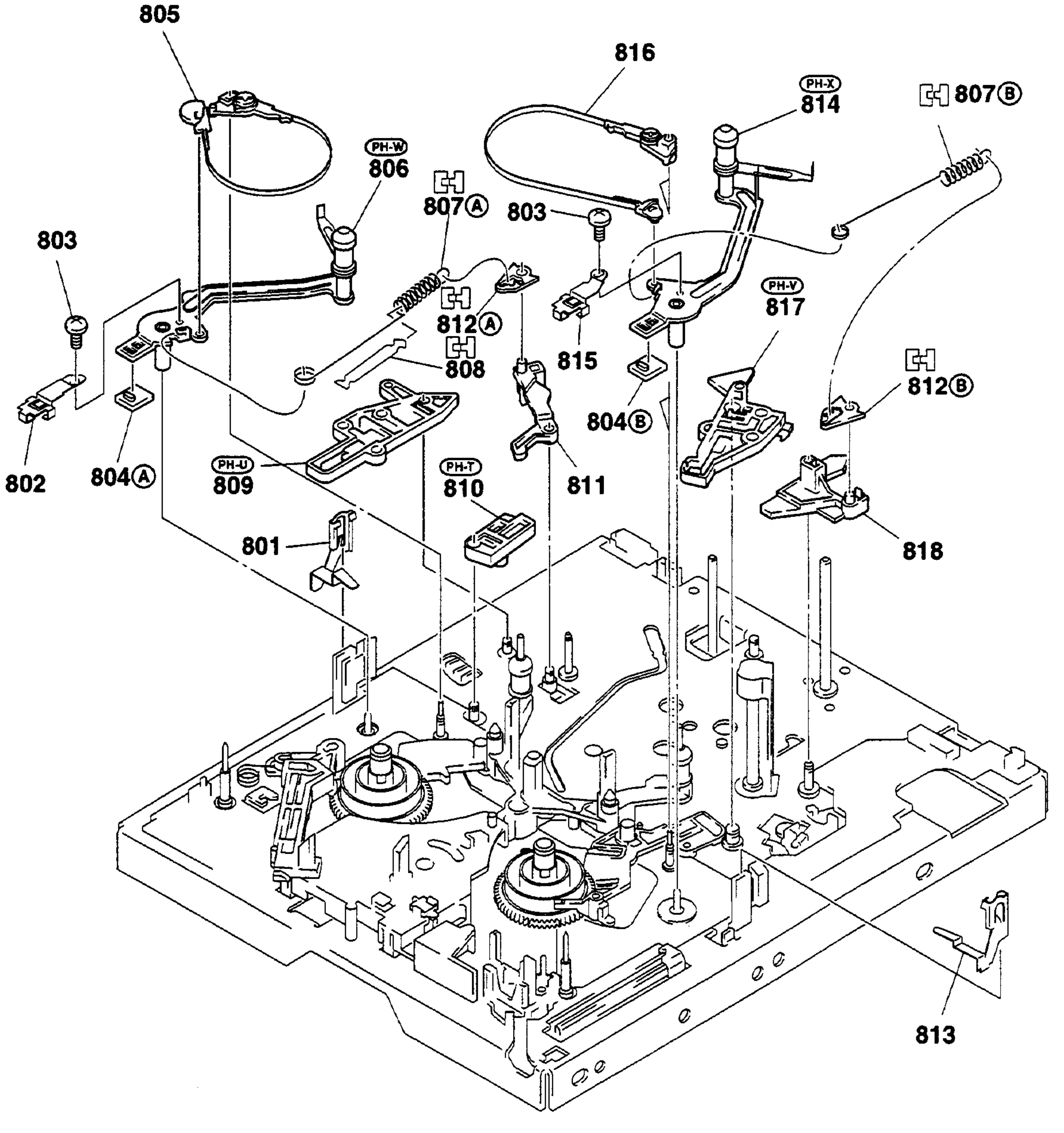
760

not supplied	Ref. Page No.
⑥	Page 5-14
⑦	Page 5-16
⑧	Page 5-15
⑨	Page 5-16

Ref. No.	Part No.	Description	Ref. Page No.
751	X-3945-801-1	BASE ASSY, TG3/4	(5-31)
752	3-967-740-01	SPRING, TG3 LOCK	(5-26,31)
753	X-3945-802-1	ROLLER ASSY, TG3/6	(5-26)
754	3-703-816-74	SCREW (M1.4X4.5), SPECIAL HEAD	
755	X-3944-897-2	FPC ASSY, MOTOR	(5-14)
756	1-770-363-11	ELASTIC CONNECTOR	(5-14)
757	3-967-785-01	STOPPER, TAPE	(5-14)
758	3-967-728-01	SCREW (M2 X 5)	
759	3-967-817-01	BASE, DRUM	(5-14)
760	A-7040-449-A	SCREW ASSY	(5-14)
761	3-947-503-01	SCREW (M1.4X2.5)	
762	X-3945-798-1	ARM ASSY, TC	(5-15)
763	3-967-675-01	HOLDER, LM	(5-15)
764	3-732-817-01	SCREW (2X4.5), TAPPING	
765	3-967-751-01	COVER, LM	(5-15)
766	3-967-767-01	WHEEL, LM WORM	(5-15)
767	3-967-768-01	GEAR, PINCH DRIVING	(5-15)
768	X-3945-803-1	BASE ASSY, TG5/6	(5-33)
769	3-967-741-01	SPRING, TG6 LOCK	(5-26,33)
770	X-3945-810-1	ARM ASSY, PINCH	(5-16)
771	3-967-645-01	SPRING (PINCH), TENSION COIL	(5-16)
772	3-967-676-01	LIMITER, PINCH	(5-16)
773	3-967-769-01	GEAR, PINCH CAM	(5-16)
774	3-967-679-01	RETAINER, PINCH	(5-16)
M901	A-7044-015-A	DRUM ASSY (DEH-08B-R)	(5-14)
M903	X-3945-784-1	MOTOR ASSY, LM (LOADING)	(5-15)

6-1-9. MECHANISM CHASSIS ASSEMBLY (2)
(TOP SIDE VIEW (2))

NOTE FOR INSTALLATION
PH- : Phase adjustment
⇔ : Take note of the position and specified direction.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813

Ref. No.	Part No.	Description	Ref. Page No.
801	3-967-809-01	RETAINER, TG2	(5-19)
802	3-967-715-01	SPRING, TG2 PLATE	(5-19)
803	3-728-148-11	SCREW (M1.4X2.5), SPECIAL HEAD	
804	3-967-714-01	MAGNET, ET	(Ⓐ:5-19/Ⓑ:5-20)
805	X-3945-792-1	BAND ASSY, S TENSION REGULATOR	(5-19)
806	X-3945-805-1	ARM ASSY, TG2	(5-19)
807	3-967-726-01	SPRING (TG2), TENSION COIL	(5-18,Ⓐ:5-9/Ⓑ:5-10)
808	3-967-685-01	SHEET, DAMPER	(5-18)
809	X-3945-782-1	ARM ASSY, TG2 LOAD	(5-19)
810	3-967-764-01	ARM, TG2 SELECTION	(5-18)
811	3-967-807-01	HOOK, TG2 SPRING	(5-18)
812	3-967-724-01	ADJUSTOR, SPRING	(5-18,Ⓐ:5-9/Ⓑ:5-10)
813	3-967-810-01	RETAINER, TG7	(5-20)
814	X-3945-806-1	ARM ASSY, TG7	(5-20)
815	3-967-694-01	SPRING, TG7 PLATE	(5-20)
816	X-3945-793-1	BAND ASSY, T TENSION REGULATOR	(5-20)
817	X-3945-783-1	ARM ASSY, TG7 LOAD	(5-20)
818	3-967-808-01	HOOK, TG7 SPRING	(5-18)

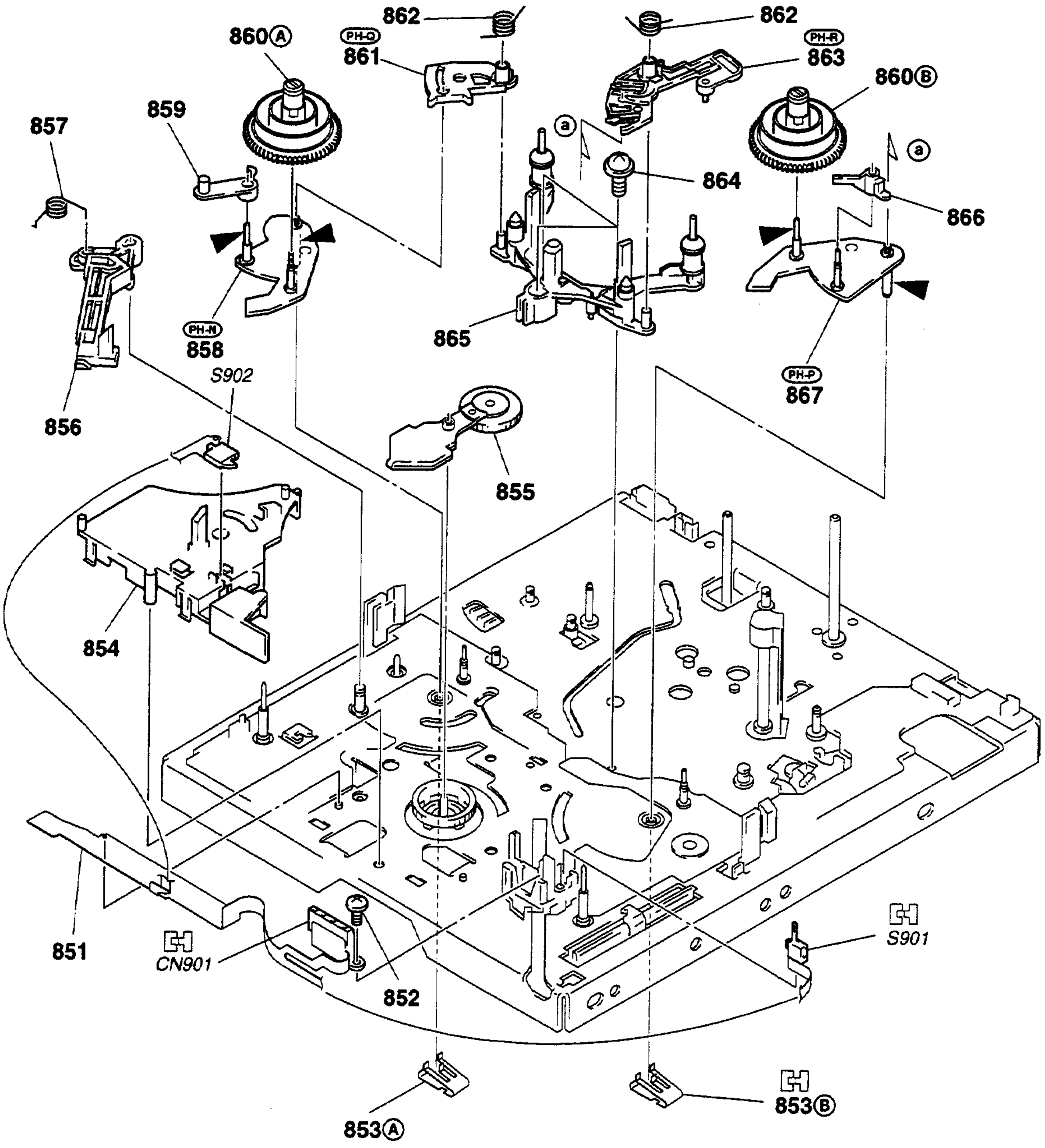
6-1-10. MECHANISM CHASSIS ASSEMBLY (3)
(TOP SIDE VIEW (3))

NOTE FOR INSTALLATION

PH- : Phase adjustment

► : Place for grease (SG-055G : 7-651-000-09).

⊞ : Take note of the position and specified direction.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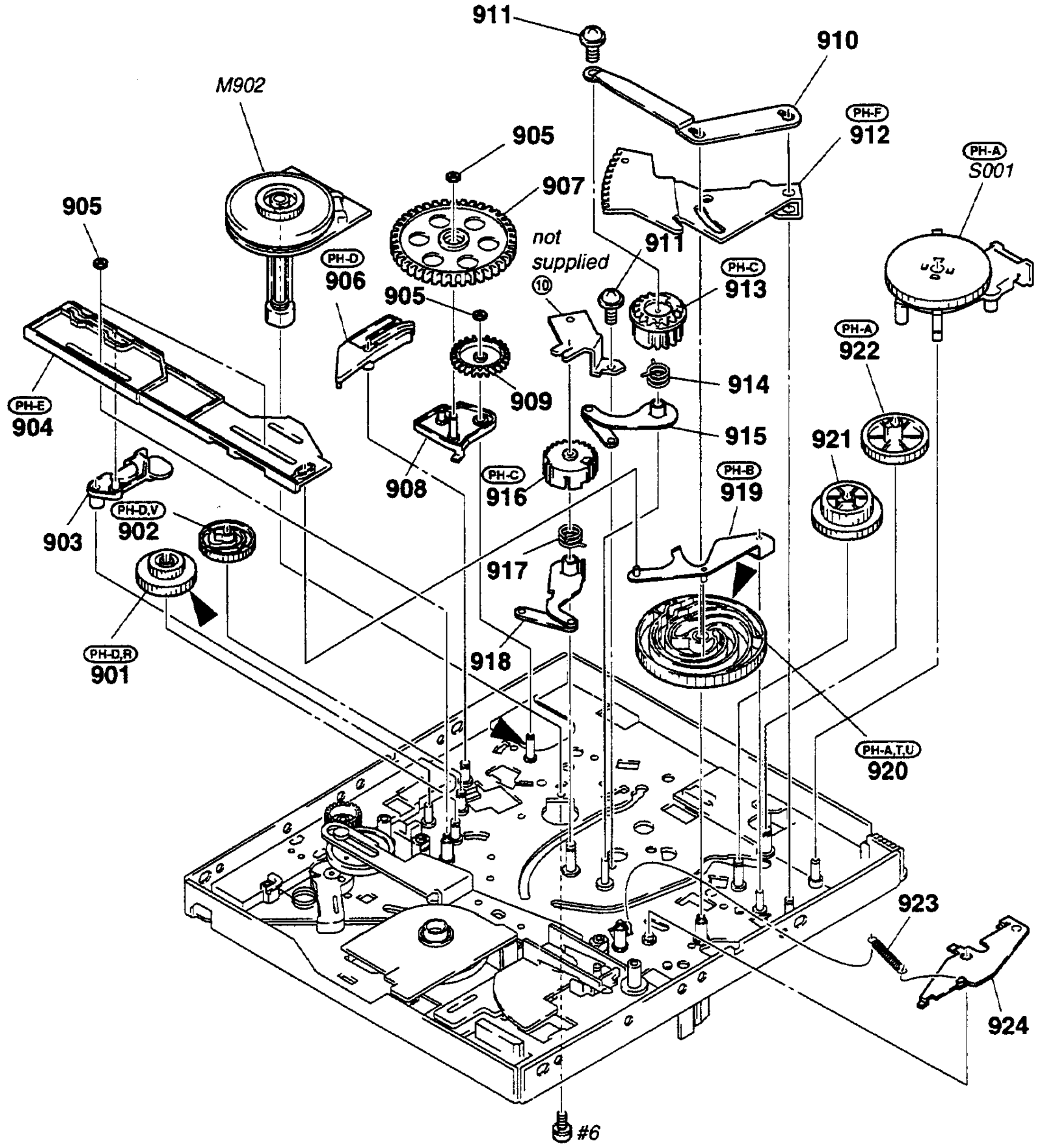
Ref. No.	Part No.	Description	Ref. Page No.
851	1-658-990-11	FP-406 FLEXIBLE BOARD	
852	3-318-201-11	SCREW (B) (1.4X3), TAPPING	
853	3-967-684-01	SPRING, PLATE	(Ⓐ:5-23/Ⓑ:5-24)
854	3-967-692-01	GUARD, GOOSENECK	(5-17)
855	X-3945-807-1	ARM ASSY, GOOSENECK	(5-17)
856	3-967-784-01	ARM, RL	(5-17)
857	3-967-683-01	SPRING, RL PRESS	(5-17)
858	X-3945-814-1	PLATE ASSY, S REEL	(5-23)
859	3-967-680-01	LINK, RL	(5-17)
860	A-7040-441-A	TABLE BLOCK ASSY, REEL	(Ⓐ:5-21/Ⓑ:5-22)
861	3-967-776-01	BRAKE, S	(5-25)
862	3-967-673-01	SPRING, S BRAKE	(5-25)
863	3-967-775-01	RATCHET, T	(5-25)
864	3-947-503-01	SCREW (M1.4X2.5)	(5-25)
865	X-3945-804-1	BASE ASSY, TG1/8	(5-25)
866	3-967-725-01	HOLDER, T REEL	(5-22)
867	X-3945-815-1	PLATE ASSY, T REEL	(5-24)
CN901	1-770-312-21	CONNECTOR 4P	(5-35)
S901	1-762-551-11	SWITCH, PUSH (REC PROOF)	(5-35)
S902	1-572-288-11	SWITCH, PUSH (C IN SW)	(5-17)

6-1-11. MECHANISM CHASSIS ASSEMBLY (4) (BOTTOM SIDE VIEW (1))

NOTE FOR INSTALLATION
PH- : Phase adjustment
▶ : Place for grease (SG-055G : 7-651-000-09).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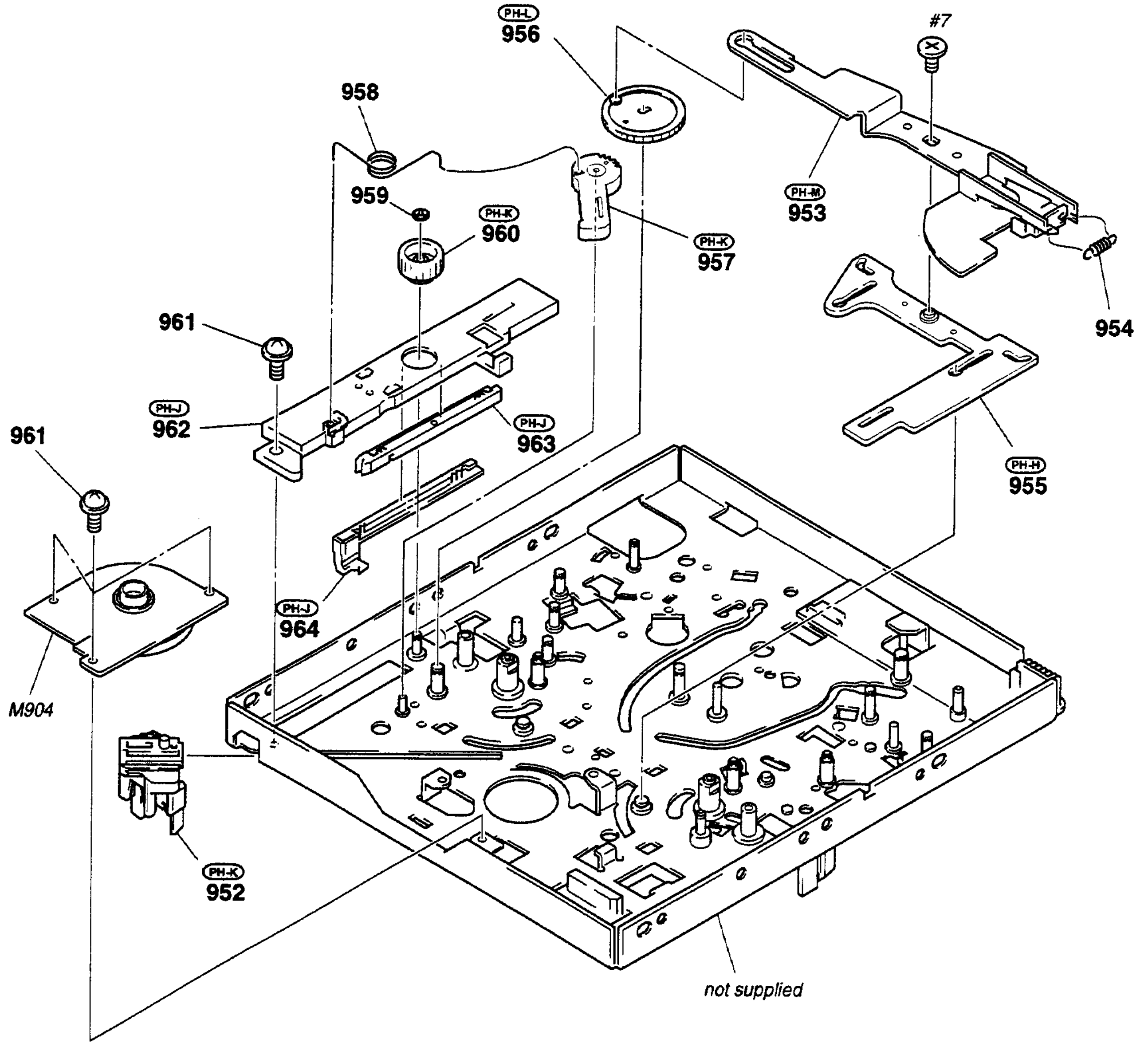
⑩	Page 5-26

Ref. No.	Part No.	Description	Ref. Page No.
901	3-967-678-01	GEAR, T CAM	(5-28)
902	3-967-756-01	GEAR, TG7 CAM	(5-28)
903	3-967-763-01	ARM, TG7 SELECTION	(5-28)
904	3-967-677-01	SLIDER, M	(5-28)
905	3-669-465-01	WASHER (1.5), STOPPER	
906	3-967-829-01	ARM, FL SELECTION	(5-28)
907	3-967-828-01	GEAR, FL JOINT	(5-26)
908	X-3945-813-1	ARM ASSY, FL JOINT	(5-27)
909	3-967-830-01	GEAR, FL RELAY	(5-27)
910	3-967-755-01	RETAINER, GL ARM	(5-28)
911	3-947-503-01	SCREW (M1.4X2.5)	
912	3-967-754-01	ARM, GL	(5-28)
913	3-967-790-01	GEAR, TG3/4	(5-31)
914	3-967-746-01	SPRING, TG3/4 LIMITER	(5-31)
915	X-3945-794-1	ARM ASSY, TG3/4	(5-31)
916	3-967-792-01	GEAR, TG5/6	(5-33)
917	3-967-748-01	SPRING, TG5/6 LIMITER	(5-33)
918	X-3945-795-1	ARM ASSY, TG5/6	(5-33)
919	3-967-753-01	ARM, M SLIDER	(5-28)
920	3-967-819-01	CAM, MAIN	(5-29)
921	3-967-765-01	GEAR, TC	(5-27)
922	3-967-766-01	GEAR, RELAY	(5-27)
923	3-967-633-01	SPRING (TG2SL), TENSION COIL	(5-29)
924	X-3945-781-1	ARM ASSY, TG2 SL	(5-29)
M902	8-835-545-01	MOTOR, DC SCD11A/J-N (CAPSTAN)	(5-26)
S001	1-762-550-11	SWITCH, ROTARY (MODE)	(5-27)

6-1-12. MECHANISM CHASSIS ASSEMBLY (5)
(BOTTOM SIDE VIEW (2))

NOTE FOR INSTALLATION
PH- : Phase adjustment


PH-L
956
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PH-K
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PH-M
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PH-K
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PH-J
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PH-J
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961
PH-H
955
PH-J
964
M904
PH-K
952
not supplied

Ref. No.	Part No.	Description	Ref. Page No.	Ref. No.	Part No.	Description	Ref. Page No.
952	3-967-690-01	HOLDER, MIC	(5-35)	959	3-669-465-01	WASHER (1.5), STOPPER	
953	X-3945-789-1	ARM ASSY, RS	(5-34)	960	3-967-681-01	GEAR, RACK JOINT	(5-35)
954	3-967-667-01	TENSION COIL SPRING	(5-34)	961	3-947-503-01	SCREW (M1.4X2.5)	
955	X-3945-788-1	LINK ASSY, PLATE	(5-37)				
956	X-3945-787-1	GEAR ASSY, RS	(5-34)	962	3-967-689-01	HOLDER, RACK	(5-35)
				963	3-967-771-01	RACK (SC)	(5-35)
957	3-967-783-01	LEVER, MIC	(5-34)	964	3-967-770-01	RACK (LC)	(5-35)
958	3-967-682-01	SPRING, MIC PRESS	(5-34)	M904	8-835-537-01	MOTOR, DC SRD11A/J-N (REEL)	(5-34)

6-2. ELECTRICAL PARTS LIST

Note:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable

- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μ A..., uPA...: μ PA..., uPB...: μ PB..., uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
  uF : μ F
- COILS
  uH : μ H

Ref. No.	Part No.	Description			Remark
*	A-7066-920-A	CM-49 (G) BOARD, COMPLETE (DSR-30) ************************************			
*	A-7066-954-A	CM-49 (I) BOARD, COMPLETE (DSR-30P) *************************************			
		(Ref No. 6,000 Series)			
		< CAPACITOR >			
C001	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C004	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C005	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C006	1-124-779-00	ELECT CHIP	10uF	20%	16V
C007	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C009	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C011	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C017	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C018	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C019	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C020	1-124-779-00	ELECT CHIP	10uF	20%	16V
C021	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C022	1-124-779-00	ELECT CHIP	10uF	20%	16V
C024	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C025	1-124-779-00	ELECT CHIP	10uF	20%	16V
C026	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C027	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C028	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C029	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C030	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C031	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C032	1-126-193-11	ELECT	1uF	20%	50V
C034	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C035	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C036	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C038	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C039	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C040	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C041	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C042	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C046	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C047	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C048	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C049	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C051	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C052	1-126-193-11	ELECT	1uF	20%	50V
C053	1-126-397-11	ELECT	33uF	20%	25V
C054	1-127-530-11	ELECT(SOLID)	22uF	20%	20V
C055	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C056	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C058	1-127-530-11	ELECT(SOLID)	22uF	20%	20V
C063	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C066	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C067	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C068	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C073	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C075	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C076	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C078	1-124-779-00	ELECT CHIP	10uF	20%	16V
C079	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C080	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C081	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C082	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C083	1-127-530-11	ELECT(SOLID)	22uF	20%	20V
C086	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C087	1-127-530-11	ELECT(SOLID)	22uF	20%	20V
C088	1-126-193-11	ELECT	1uF	20%	50V
C090	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C091	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C092	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C093	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C094	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C095	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C096	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C099	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C101	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C102	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C103	1-126-204-11	ELECT CHIP	47uF	20%	16V
C104	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C105	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C106	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C107	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C108	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C111	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C112	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C113	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C115	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V

CM-49

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
C117	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C118	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C119	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C120	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C121	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C122	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C123	1-124-779-00	ELECT CHIP	10uF	20%	16V
C126	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C128	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C129	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C133	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C504	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C505	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C506	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C508	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C509	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C510	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C511	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C512	1-126-193-11	ELECT	1uF	20%	50V
C513	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C514	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C515	1-126-206-11	ELECT CHIP	100uF	20%	6.3V

< CONNECTOR >

CN001	1-770-699-11	CONNECTOR, FFC/FPC 16P
CN002	1-566-524-21	CONNECTOR, FPC (ZIF) 8P
CN003	1-750-345-11	CONNECTOR, FFC/EPC (ZIF)
* CN004	1-564-033-00	PIN, CONNECTOR 8P
CN005	1-770-692-11	CONNECTOR, FFC/FPC 9P
* CN006	1-691-074-11	HOUSING, CONNECTOR 15P
* CN007	1-691-074-11	HOUSING, CONNECTOR 15P
CN008	1-770-697-11	CONNECTOR, FFC/FPC 14P

< DIODE >

D001	8-719-026-23	DIODE MA786
D002	8-719-106-53	DIODE RD10M-B2
D004	8-719-938-78	DIODE SB10-05PCP
D011	8-719-026-23	DIODE MA786
D012	8-719-026-23	DIODE MA786
D501	8-719-938-78	DIODE SB10-05PCP
D502	8-719-108-24	DIODE 1SS223

< FUSE >

⚠F001	1-532-777-21	FUSE, MYCRO (SECONDARY)(1.25A 125V)	(DSR-30)

< FLUORESCENT INDICATOR >

FL001	1-233-351-21	FILTER, BAND PASS
FL002	1-233-350-21	FILTER, BAND PASS

< IC >

IC001	8-759-062-66	IC TC7S66F
IC002	8-759-235-19	IC TC74HC08AF(EL)
IC003	8-752-880-78	IC CXP912032-034R
IC005	8-759-327-00	IC CXA8044Q-T4
IC006	8-759-085-67	IC LM339NS
IC008	8-759-186-44	IC TC74VHC125F
IC009	8-759-182-89	IC BA6219BFP-Y
IC011	8-759-148-05	IC CXA8010M

Ref. No.	Part No.	Description			Remark
IC012	8-759-945-17	IC MB3775PF			
IC014	8-759-510-73	IC BA10393F-E2			
IC016	8-759-510-71	IC BA10358F-E2			
IC017	8-759-011-65	IC TC74HC4053AF			
IC018	8-759-085-67	IC LM339NS			
IC019	8-759-510-71	IC BA10358F-E2			
IC021	8-759-335-42	IC CXA1793N-E2			
IC022	8-759-339-61	IC LB1897D			
IC501	8-759-098-24	IC PQ30RV11			
IC503	8-759-339-61	IC LB1897D			

< COIL >

L003	1-412-282-41	INDUCTOR	470uH
L004	1-414-398-11	INDUCTOR	10uH
L005	1-414-398-11	INDUCTOR	10uH
L006	1-414-398-11	INDUCTOR	10uH
L007	1-414-402-11	INDUCTOR	47uH
L008	1-424-522-21	COIL, CHOKE 10uH	
L010	1-424-522-21	COIL, CHOKE 10uH	
L011	1-409-535-41	COIL, CHOKE 100uH	
L013	1-424-524-21	COIL, CHOKE 47uH	
L014	1-414-402-11	INDUCTOR	47uH
L501	1-414-402-11	INDUCTOR	47uH
L502	1-414-402-11	INDUCTOR	47uH

< IC LINK >

⚠PS001	1-532-840-21	LINK, IC (PRF1250 1.25A)(DSR-30P)

< TRANSISTOR >

Q001	8-729-216-22	TRANSISTOR 2SA1162-G
Q002	8-729-421-19	TRANSISTOR UN2213
Q003	8-729-010-25	TRANSISTOR MSD601-RT1
Q004	8-729-421-22	TRANSISTOR UN2211
Q008	8-729-010-25	TRANSISTOR MSD601-RT1
Q009	8-729-010-25	TRANSISTOR MSD601-RT1
Q012	8-729-208-96	TRANSISTOR 2SA1242-Y
Q014	8-729-421-19	TRANSISTOR UN2213
Q500	8-729-216-22	TRANSISTOR 2SA1162-G
Q501	8-729-216-22	TRANSISTOR 2SA1162-G
Q502	8-729-208-96	TRANSISTOR 2SA1242-Y
Q503	8-729-421-19	TRANSISTOR UN2213
Q504	8-729-421-19	TRANSISTOR UN2213

< RESISTOR >

R34	1-216-025-91	METAL GLAZE	100	5%	1/10W
R35	1-216-025-91	METAL GLAZE	100	5%	1/10W
R36	1-216-025-91	METAL GLAZE	100	5%	1/10W
R77	1-216-025-91	METAL GLAZE	100	5%	1/10W
R001	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R002	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R003	1-216-015-00	METAL CHIP	39	5%	1/10W
R005	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R006	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R009	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R010	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R011	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R012	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R016	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R017	1-216-295-91	CONDUCTOR, CHIP (2012)			

Ref. No.	Part No.	Description			Remark
R018	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R019	1-216-295-91	CONDUCTOR, CHIP (2012)			
R020	1-216-093-00	METAL CHIP	68K	5%	1/10W
R021	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R026	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R027	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R028	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R029	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R030	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R032	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R033	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R039	1-216-075-00	METAL CHIP	12K	5%	1/10W
R040	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R046	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R050	1-216-077-00	METAL CHIP	15K	5%	1/10W
R051	1-216-073-00	METAL CHIP	10K	5%	1/10W
R052	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R053	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R054	1-216-295-91	CONDUCTOR, CHIP (2012)			
R055	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R059	1-216-043-91	METAL GLAZE	560	5%	1/10W
R060	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R061	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R063	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R064	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R066	1-216-025-91	METAL GLAZE	100	5%	1/10W
R067	1-216-073-00	METAL CHIP	10K	5%	1/10W
R069	1-216-085-00	METAL CHIP	33K	5%	1/10W
R070	1-216-073-00	METAL CHIP	10K	5%	1/10W
R071	1-216-025-91	METAL GLAZE	100	5%	1/10W
R075	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R076	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R078	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R079	1-216-073-00	METAL CHIP	10K	5%	1/10W
R080	1-216-025-91	METAL GLAZE	100	5%	1/10W
R081	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R082	1-216-073-00	METAL CHIP	10K	5%	1/10W
R083	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R084	1-216-025-91	METAL GLAZE	100	5%	1/10W
R085	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R086	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R087	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R088	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R089	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R090	1-216-081-00	METAL CHIP	22K	5%	1/10W
R091	1-216-081-00	METAL CHIP	22K	5%	1/10W
R092	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R093	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R094	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R095	1-216-645-11	METAL CHIP	560	0.5%	1/10W
R096	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R097	1-216-073-00	METAL CHIP	10K	5%	1/10W
R098	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R099	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R102	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R103	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R104	1-216-295-91	CONDUCTOR, CHIP (2012)			
R107	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R108	1-216-295-91	CONDUCTOR, CHIP (2012)			
R109	1-216-081-00	METAL CHIP	22K	5%	1/10W
R110	1-216-073-00	METAL CHIP	10K	5%	1/10W
R111	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R112	1-216-081-00	METAL CHIP	22K	5%	1/10W
R113	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R114	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R115	1-216-043-91	METAL GLAZE	560	5%	1/10W
R116	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R117	1-216-043-91	METAL GLAZE	560	5%	1/10W
R118	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R119	1-216-073-00	METAL CHIP	10K	5%	1/10W
R120	1-216-073-00	METAL CHIP	10K	5%	1/10W
R121	1-219-107-91	METAL GLAZE	1.5	5%	1/8W
R122	1-219-107-91	METAL GLAZE	1.5	5%	1/8W
R125	1-219-107-91	METAL GLAZE	1.5	5%	1/8W
R126	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R127	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R128	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R129	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R130	1-216-025-91	METAL GLAZE	100	5%	1/10W
R131	1-216-025-91	METAL GLAZE	100	5%	1/10W
R132	1-216-025-91	METAL GLAZE	100	5%	1/10W
R133	1-216-075-00	METAL CHIP	12K	5%	1/10W
R134	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R136	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R137	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R138	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R143	1-216-073-00	METAL CHIP	10K	5%	1/10W
R146	1-216-295-91	CONDUCTOR, CHIP (2012)			
R148	1-216-017-91	METAL GLAZE	47	5%	1/10W
R153	1-216-295-91	CONDUCTOR, CHIP (2012)			
R154	1-216-295-91	CONDUCTOR, CHIP (2012)			
R155	1-216-295-91	CONDUCTOR, CHIP (2012)			
R158	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R161	1-216-295-91	CONDUCTOR, CHIP (2012)			
R164	1-216-672-11	METAL CHIP	7.5K	0.5%	1/10W
R165	1-216-017-91	METAL GLAZE	47	5%	1/10W
R167	1-216-017-91	METAL GLAZE	47	5%	1/10W
R168	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R169	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R171	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R176	1-216-033-00	METAL CHIP	220	5%	1/10W
R182	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R193	1-216-079-00	METAL CHIP	18K	5%	1/10W
R194	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R195	1-216-079-00	METAL CHIP	18K	5%	1/10W
R196	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R207	1-216-073-00	METAL CHIP	10K	5%	1/10W
R208	1-216-045-00	METAL CHIP	680	5%	1/10W
R209	1-216-045-00	METAL CHIP	680	5%	1/10W
R211	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R212	1-216-645-11	METAL CHIP	560	0.5%	1/10W
R213	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R214	1-216-073-00	METAL CHIP	10K	5%	1/10W
R215	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R216	1-216-081-00	METAL CHIP	22K	5%	1/10W
R217	1-216-073-00	METAL CHIP	10K	5%	1/10W
R218	1-216-081-00	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R220	1-216-043-91	METAL GLAZE	560	5%	1/10W
R221	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R225	1-216-295-91	CONDUCTOR, CHIP (2012)			
R227	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R228	1-216-043-91	METAL GLAZE	560	5%	1/10W
R229	1-216-048-00	METAL CHIP	910	5%	1/10W
R230	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R231	1-216-048-00	METAL CHIP	910	5%	1/10W
R232	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R233	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R234	1-216-075-00	METAL CHIP	12K	5%	1/10W
R235	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R241	1-216-073-00	METAL CHIP	10K	5%	1/10W
R244	1-216-077-00	METAL CHIP	15K	5%	1/10W
R245	1-217-671-11	METAL CHIP	1	5%	1/10W
R247	1-216-073-00	METAL CHIP	10K	5%	1/10W
R248	1-217-671-11	METAL CHIP	1	5%	1/10W
R249	1-217-671-11	METAL CHIP	1	5%	1/10W
R250	1-217-671-11	METAL CHIP	1	5%	1/10W
R253	1-216-073-00	METAL CHIP	10K	5%	1/10W
R256	1-216-075-00	METAL CHIP	12K	5%	1/10W
R257	1-216-079-00	METAL CHIP	18K	5%	1/10W
R259	1-216-295-91	CONDUCTOR, CHIP (2012)			
R262	1-216-093-00	METAL CHIP	68K	5%	1/10W
R268	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R270	1-216-073-00	METAL CHIP	10K	5%	1/10W
R271	1-216-073-00	METAL CHIP	10K	5%	1/10W
R274	1-216-073-00	METAL CHIP	10K	5%	1/10W
R275	1-216-099-00	METAL CHIP	120K	5%	1/10W
R283	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R284	1-216-025-91	METAL GLAZE	100	5%	1/10W
R285	1-216-025-91	METAL GLAZE	100	5%	1/10W
R286	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R290	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R506	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R516	1-216-295-91	CONDUCTOR, CHIP (2012)			
R517	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R518	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R519	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R520	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R521	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R524	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R525	1-216-025-91	METAL GLAZE	100	5%	1/10W
R526	1-216-025-91	METAL GLAZE	100	5%	1/10W
R528	1-216-295-91	CONDUCTOR, CHIP (2012)			
R529	1-219-107-91	METAL GLAZE	1.5	5%	1/8W
R530	1-219-107-91	METAL GLAZE	1.5	5%	1/8W
R531	1-219-107-91	METAL GLAZE	1.5	5%	1/8W
R535	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R536	1-216-295-91	CONDUCTOR, CHIP (2012)			
R537	1-216-295-91	CONDUCTOR, CHIP (2012)			
R538	1-216-295-91	CONDUCTOR, CHIP (2012)			
R541	1-216-073-00	METAL CHIP	10K	5%	1/10W
R542	1-216-073-00	METAL CHIP	10K	5%	1/10W
R543	1-216-025-91	METAL GLAZE	100	5%	1/10W
R545	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R546	1-216-073-00	METAL CHIP	10K	5%	1/10W
R547	1-216-025-91	METAL GLAZE	100	5%	1/10W
R549	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R550	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R551	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R552	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R553	1-216-073-00	METAL CHIP	10K	5%	1/10W
R554	1-216-073-00	METAL CHIP	10K	5%	1/10W
R555	1-216-073-00	METAL CHIP	10K	5%	1/10W
R556	1-216-025-91	METAL GLAZE	100	5%	1/10W
R560	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R561	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R562	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R563	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R564	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R565	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R566	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R567	1-216-017-91	METAL GLAZE	47	5%	1/10W
R568	1-216-017-91	METAL GLAZE	47	5%	1/10W
R569	1-216-017-91	METAL GLAZE	47	5%	1/10W
R570	1-216-017-91	METAL GLAZE	47	5%	1/10W
R572	1-216-295-91	CONDUCTOR, CHIP (2012)			
		< VIBRATOR >			
X001	1-760-655-21	VIBRATOR, CRYSTAL (20MHz)			

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* A-7072-629-A CN-93 (C) BOARD, COMPLETE (DSR-30P)
* A-7072-980-A CN105 BOARD, COMPLETE (DSR-30)
****
(Ref No. 5,000 Series)

		< CONNECTOR >	
	CN501	1-563-141-11	CONNECTOR, F.P.C 8P
*	CN502	1-566-005-11	PIN, CONNECTOR (PC BOARD) 8P

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* A-7072-984-A DF-12 BOARD, COMPLETE (DSR-30)
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* A-7073-018-A DF-12 (I) BOARD, COMPLETE (DSR-30P)
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(Ref No. 1,000 Series)

		< CAPACITOR >			
C681	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C682	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C683	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C684	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C685	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C687	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
		< CONNECTOR >			
CN681	1-565-728-11	CONNECTOR, FPC 17P			
		< FERRITE BEAD >			
FB681	1-216-295-91	CONDUCTOR, CHIP (2012)			
FB682	1-216-295-91	CONDUCTOR, CHIP (2012)			
FB683	1-216-295-91	CONDUCTOR, CHIP (2012)			
FB686	1-216-295-91	CONDUCTOR, CHIP (2012)			
FB688	1-216-295-91	CONDUCTOR, CHIP (2012)			
FB689	1-216-295-91	CONDUCTOR, CHIP (2012)			
FB690	1-216-295-91	CONDUCTOR, CHIP (2012)			

Ref. No.	Part No.	Description			Remark
FB692	1-216-295-91	CONDUCTOR, CHIP (2012)			
FB693	1-216-295-91	CONDUCTOR, CHIP (2012)			
		< IC >			
IC681	8-752-352-30	IC CXD2705AQ			
		< RESISTOR >			
R682	1-216-845-11	METAL CHIP	100K	5%	1/16W
R683	1-216-845-11	METAL CHIP	100K	5%	1/16W
R684	1-216-833-11	METAL CHIP	10K	5%	1/16W
R685	1-216-837-11	METAL CHIP	22K	5%	1/16W
R686	1-216-839-11	METAL CHIP	33K	5%	1/16W
R690	1-216-142-00	METAL GLAZE	4.7	5%	1/8W
		< VIBRATOR >			
X681	1-579-069-11	VIBRATOR, CRYSTAL (49.152MHz)			

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* A-7072-606-A FJ-19 (C) BOARD, COMPLETE
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(Ref No. 5,000 Series)

Ref. No.	Part No.	Description			Remark
*	3-947-530-01	HOLDER, TERMINAL, S			
		< CAPACITOR >			
C820	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C850	1-124-779-00	ELECT CHIP	10uF	20%	16V
C851	1-124-779-00	ELECT CHIP	10uF	20%	16V
C852	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C853	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C860	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C861	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C862	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C863	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C864	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C865	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C866	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C867	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C880	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C881	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C882	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C883	1-163-038-91	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN801	1-774-768-11	CONNECTOR, FFC/FPC 17P			
		< DIODE >			
D820	8-719-421-59	DIODE MA3130WA-TX			
D821	8-719-421-59	DIODE MA3130WA-TX			
D822	8-719-421-59	DIODE MA3130WA-TX			
D830	8-719-421-59	DIODE MA3130WA-TX			
D860	8-719-421-59	DIODE MA3130WA-TX			
D861	8-719-421-59	DIODE MA3130WA-TX			
D862	8-719-801-78	DIODE 1SS184			
D880	8-719-421-59	DIODE MA3130WA-TX			
D881	8-719-421-59	DIODE MA3130WA-TX			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC850	8-759-745-64	IC NJM4560M			
		< JACK >			
J801	1-566-850-31	CONNECTOR, (S) TERMINAL 4P (LINE 2 IN S VIDEO)			
J802	1-764-149-11	JACK, PIN 3P (LINE 2 IN)			
J880	1-695-920-21	JACK, ULTRA MINIATURE 1P (LANC)			
		< RESISTOR >			
R801	1-216-295-91	CONDUCTOR, CHIP (2012)			
R820	1-216-022-00	METAL CHIP	75	5%	1/10W
R821	1-216-295-91	CONDUCTOR, CHIP (2012)			
R822	1-216-022-00	METAL CHIP	75	5%	1/10W
R823	1-216-295-91	CONDUCTOR, CHIP (2012)			
R830	1-216-022-00	METAL CHIP	75	5%	1/10W
R831	1-216-295-91	CONDUCTOR, CHIP (2012)			
R850	1-216-073-00	METAL CHIP	10K	5%	1/10W
R851	1-216-073-00	METAL CHIP	10K	5%	1/10W
R859	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R860	1-216-085-00	METAL CHIP	33K	5%	1/10W
R861	1-216-085-00	METAL CHIP	33K	5%	1/10W
R862	1-216-085-00	METAL CHIP	33K	5%	1/10W
R863	1-216-085-00	METAL CHIP	33K	5%	1/10W
R864	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R865	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R866	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R867	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R868	1-216-295-91	CONDUCTOR, CHIP (2012)			
R869	1-216-295-91	CONDUCTOR, CHIP (2012)			
R870	1-216-073-00	METAL CHIP	10K	5%	1/10W
R871	1-216-073-00	METAL CHIP	10K	5%	1/10W
R880	1-216-295-91	CONDUCTOR, CHIP (2012)			
R881	1-216-295-91	CONDUCTOR, CHIP (2012)			
R882	1-216-295-91	CONDUCTOR, CHIP (2012)			
R883	1-216-295-91	CONDUCTOR, CHIP (2012)			
R884	1-216-295-91	CONDUCTOR, CHIP (2012)			

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* A-7072-449-A FL-69 BOARD, COMPLETE (DSR-30)
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* A-7072-607-A FL-69 (C) BOARD, COMPLETE (DSR-30P)
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(Ref No. 8,000 Series)

Ref. No.	Part No.	Description			Remark
		< BUZZER >			
BZ201	1-529-104-11	BUZZER, PIEZOELECTRIC			
		< CAPACITOR >			
C251	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C252	1-126-923-11	ELECT	220uF	20%	10V
		< CONNECTOR >			
CN201	1-774-664-11	CONNECTOR, BOARD TO BOARD 9P			
		< DIODE >			
D201	8-719-028-30	DIODE SPR-39MVWF			

Ref. No.	Part No.	Description	Remark
D251	8-719-104-34	DIODE 1S2836	
		< IC >	
IC251	8-749-923-34	IC PHOTO DIODE GP1U59XB (R)	
		< JUMPER RESISTOR >	
JR201	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR202	1-216-295-91	CONDUCTOR, CHIP (2012)	
JR203	1-216-296-91	CONDUCTOR, CHIP (3216)	
		< TRANSISTOR >	
Q201	8-729-424-18	TRANSISTOR UN2113 (DSR-30P)	
		< RESISTOR >	
R201	1-216-031-00	METAL CHIP 180 5%	1/10W
R202	1-216-031-00	METAL CHIP 180 5%	1/10W (DSR-30P)
R251	1-216-089-91	METAL GLAZE 47K 5%	1/10W
		< SWITCH >	
S201	1-572-596-21	SWITCH, KEY BOARD (POWER)	

Ref. No.	Part No.	Description	Remark
*	A-7066-953-A	FM-26 (H) BOARD, COMPLETE (DSR-30) ************************************	
*	A-7066-957-A	FM-26 (I) BOARD, COMPLETE (DSR-30P) ************************************	
		(Ref No. 8,000 Series)	
*	3-602-165-01	HOLDER, INDICATION TUBE	
		< CAPACITOR >	
C501	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C502	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C503	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C504	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C505	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C506	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C507	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C508	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C509	1-163-239-11	CERAMIC CHIP 33PF 5%	50V
C511	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C512	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C513	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C514	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C515	1-124-778-00	ELECT CHIP 22uF 20%	6.3V
C526	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C527	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C555	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C560	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C570	1-126-395-11	ELECT 22uF 20%	16V
C571	1-165-319-11	CERAMIC CHIP 0.1uF	50V
		< CONNECTOR >	
CN501	1-774-666-11	CONNECTOR, FFC/FPC (DSR-30P)	
CN502	1-774-665-11	CONNECTOT, BOARD TO BOAR9P	
CN503	1-770-708-11	CONNECTOR, FFC/FPC 25P	

Ref. No.	Part No.	Description	Remark
		< TRIMMER >	
CT501	1-141-423-61	CAP, ADJ 20PF	
		< DIODE >	
D501	8-719-421-59	DIODE MA3130WA-TX	
D502	8-719-104-34	DIODE 1S2836	
D504	8-719-200-82	DIODE 11ES2	
D510	8-719-421-59	DIODE MA3130WA-TX	
D570	8-719-028-06	DIODE CL-140UR-CD	
D571	8-719-985-27	DIODE CL-140Y-CD	
D572	8-719-987-02	DIODE CL-140PG-CD	
D573	8-719-985-27	DIODE CL-140Y-CD	
D574	8-719-985-27	DIODE CL-140Y-CD	
D578	8-719-985-27	DIODE CL-140Y-CD	
D579	8-719-985-27	DIODE CL-140Y-CD (DSR-30)	
D581	8-719-028-06	DIODE CL-140UR-CD	
D582	8-719-985-27	DIODE CL-140Y-CD	
D583	8-719-985-27	DIODE CL-140Y-CD	
D584	8-719-985-27	DIODE CL-140Y-CD	
D585	8-719-028-06	DIODE CL-140UR-CD	
D586	8-719-985-27	DIODE CL-140Y-CD	
D587	8-719-985-27	DIODE CL-140Y-CD	
D588	8-719-028-06	DIODE CL-140UR-CD	
D589	8-719-985-27	DIODE CL-140Y-CD	
		< FLUORESCENT INDICATOR >	
FL501	1-517-485-11	TUBE, FLUORESCENT INDICATOR	
		< IC >	
IC501	8-759-449-50	IC MB89096PF-G-231-BND	
IC502	8-759-279-61	IC ST93CS66B1	
IC503	8-759-248-87	IC MM1256XF-BE	
IC580	8-759-448-24	IC NJU3718G(TE2)	
		< COIL >	
L501	1-414-398-11	INDUCTOR 10uH	
		< RESISTOR >	
R501	1-216-041-00	METAL CHIP 470 5%	1/10W
R502	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R503	1-216-095-00	METAL CHIP 82K 5%	1/10W
R504	1-216-113-00	METAL CHIP 470K 5%	1/10W
R509	1-216-295-91	CONDUCTOR, CHIP (2012)	
R510	1-216-001-00	METAL CHIP 10 5%	1/10W
R511	1-216-295-91	CONDUCTOR, CHIP (2012)	
R512	1-216-001-00	METAL CHIP 10 5%	1/10W
R513	1-216-001-00	METAL CHIP 10 5%	1/10W
R517	1-216-295-91	CONDUCTOR, CHIP (2012)	
R518	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R526	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R527	1-216-295-91	CONDUCTOR, CHIP (2012)	
R528	1-216-295-91	CONDUCTOR, CHIP (2012)	
R529	1-216-295-91	CONDUCTOR, CHIP (2012)	
R550	1-216-001-00	METAL CHIP 10 5%	1/10W
R555	1-216-073-00	METAL CHIP 10K 5%	1/10W
R561	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R562	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R563	1-216-049-91	METAL GLAZE 1K 5%	1/10W

Ref. No.	Part No.	Description			Remark
R566	1-216-073-00	METAL CHIP	10K	5%	1/10W
R569	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R570	1-216-037-00	METAL CHIP	330	5%	1/10W
R571	1-216-031-00	METAL CHIP	180	5%	1/10W
R572	1-216-031-00	METAL CHIP	180	5%	1/10W
R573	1-216-031-00	METAL CHIP	180	5%	1/10W
R574	1-216-031-00	METAL CHIP	180	5%	1/10W
R578	1-216-031-00	METAL CHIP	180	5%	1/10W
R579	1-216-031-00	METAL CHIP	180	5%	1/10W (DSR-30)
R580	1-216-295-91	CONDUCTOR, CHIP (2012)			
R581	1-216-031-00	METAL CHIP	180	5%	1/10W
R582	1-216-037-00	METAL CHIP	330	5%	1/10W
R583	1-216-031-00	METAL CHIP	180	5%	1/10W
R584	1-216-031-00	METAL CHIP	180	5%	1/10W
R585	1-216-031-00	METAL CHIP	180	5%	1/10W
R586	1-216-031-00	METAL CHIP	180	5%	1/10W
R587	1-216-031-00	METAL CHIP	180	5%	1/10W
R588	1-216-031-00	METAL CHIP	180	5%	1/10W
R589	1-216-031-00	METAL CHIP	180	5%	1/10W
R590	1-216-295-91	CONDUCTOR, CHIP (2012)			
R591	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R592	1-216-295-91	CONDUCTOR, CHIP (2012)			
R593	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R594	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R595	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R596	1-216-083-00	METAL CHIP	27K	5%	1/10W
R597	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R598	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R599	1-216-089-91	METAL GLAZE	47K	5%	1/10W
		< SWITCH >			
S501	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(CL)			
S502	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(SELECT)			
S503	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(RESET)			
S590	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(⏏)			
S591	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(❚❚)			
S592	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(▶▶)			
S593	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(■)			
S594	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(◀◀)			
S595	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(▶)			
S596	1-570-909-11	SWITCH, TACTIL (REFLOW TYPE)(●)			
		< VIBRATOR >			
X501	1-579-436-11	VIBLATOR, CRYSTAL (32 KHz)			
X502	1-579-553-11	VIBRATOR (12 MHz)			

FP-406 BOARD, COMPLETE

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(Ref No. 7,000 Series)

Ref. No.	Part No.	Description
	1-658-990-11	FP-406 FLEXIBLE BOARD
	3-318-201-11	SCREW (B) (1.4X3), TAPPING
	3-967-690-01	HOLDER, MIC
	3-970-665-01	CLEANER, MIC
		< CONNECTOR >
CN901	1-770-312-21	CONNECTOR 4P

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S901	1-762-551-11	SWITCH, PUSH (REC PROOF)	
S902	1-572-288-11	SWITCH, PUSH (C IN SW)	

Ref. No.	Part No.	Description
*	A-7072-608-A	HP-91 (C) BOARD, COMPLETE

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(Ref No. 5,000 Series)

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C301	1-104-396-11	ELECT	10uF	20%	16V
C302	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C303	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C304	1-104-396-11	ELECT	10uF	20%	16V
C305	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C306	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C307	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C350	1-104-396-11	ELECT	10uF	20%	16V
C351	1-104-396-11	ELECT	10uF	20%	16V
C352	1-104-396-11	ELECT	10uF	20%	16V
C354	1-104-396-11	ELECT	10uF	20%	16V
C355	1-104-396-11	ELECT	10uF	20%	16V
C356	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C357	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C358	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C359	1-126-301-11	ELECT	1uF	20%	50V
C360	1-126-301-11	ELECT	1uF	20%	50V
C361	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C362	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C363	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN301	1-774-758-11	CONNECTOR, FFC/FPC 11P			
		< DIODE >			
D301	8-719-421-59	DIODE MA3130WA-TX			
D302	8-719-421-59	DIODE MA3130WA-TX			
D303	8-719-421-59	DIODE MA3130WA-TX			
D351	8-719-421-59	DIODE MA3130WA-TX			
D352	8-719-421-59	DIODE MA3130WA-TX			
		< IC >			
IC301	8-759-356-17	IC NJM4556AM-A-TE2			
IC350	8-759-745-64	IC NJM4560M			
		< JACK >			
J301	1-507-833-00	JACK (PHONES)			
J350	1-764-136-11	JACK (SMALL TYPE) (WITH SWITCH)(MIC)			
		< JUMPER RESISTOR >			
JR301	1-216-296-91	CONDUCTOR, CHIP (3216)			
JR302	1-216-295-91	CONDUCTOR, CHIP (2012)			
JR303	1-216-295-91	CONDUCTOR, CHIP (2012)			
JR304	1-216-296-91	CONDUCTOR, CHIP (3216)			
JR305	1-216-296-91	CONDUCTOR, CHIP (3216)			
JR306	1-216-296-91	CONDUCTOR, CHIP (3216)			
JR308	1-216-296-91	CONDUCTOR, CHIP (3216)			
JR309	1-216-296-91	CONDUCTOR, CHIP (3216)			
JR310	1-216-296-91	CONDUCTOR, CHIP (3216)			

Ref. No.	Part No.	Description	Remark
JR311	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR312	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR313	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR314	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR315	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR316	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR317	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR318	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR319	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR320	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR321	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR322	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR325	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR326	1-216-296-91	CONDUCTOR, CHIP (3216)	
		< TRANSISTOR >	
Q350	8-729-010-25	TRANSISTOR MSD601-RT1	
Q351	8-729-010-25	TRANSISTOR MSD601-RT1	
Q352	8-729-010-25	TRANSISTOR MSD601-RT1	
Q353	8-729-010-25	TRANSISTOR MSD601-RT1	
		< RESISTOR >	
R301	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R302	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R303	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R304	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R305	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R306	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R307	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R308	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R309	1-216-019-00	METAL CHIP 56 5% 1/10W	
R310	1-216-019-00	METAL CHIP 56 5% 1/10W	
R311	1-216-295-91	CONDUCTOR, CHIP (2012)	
R351	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R352	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R353	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R354	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R355	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R356	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R357	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R358	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R359	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R360	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R361	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R362	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R363	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R364	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R365	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R366	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R367	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R368	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R369	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R370	1-500-241-21	BEAD, FERRITE (CHIP)	
R371	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R372	1-500-241-21	BEAD, FERRITE (CHIP)	
		< VARIABLE RESISTOR >	
RV301	1-223-525-11	RES, VAR, CARBON 10K/10K (VOL)	
*	A-7072-630-A	IN-51 (C) BOARD, COMPLETE ************************** (Ref No. 1,000 Series)	
		< CONNECTOR >	
CN700	1-770-496-11	CONNECTOR, SQUARE TYPE 4P	
* CN702	1-564-005-11	PIN, CONNECTOR 6P	
*	A-7066-925-A	JC-18 (G) BOARD, COMPLETE (DSR-30) ***********************************	
*	A-7066-955-A	JC-18 (I) BOARD, COMPLETE (DSR-30P) ************************************ (Ref No. 2,000 Series)	
		< CAPACITOR >	
C001	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C002	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C095	1-104-847-11	TANTAL. CHIP 22uF 20% 4V	
C101	1-104-847-11	TANTAL. CHIP 22uF 20% 4V	
C102	1-104-847-11	TANTAL. CHIP 22uF 20% 4V	
C107	1-135-091-00	TANTALUM CHIP 1uF 20% 16V	
C108	1-135-091-00	TANTALUM CHIP 1uF 20% 16V	
C109	1-135-091-00	TANTALUM CHIP 1uF 20% 16V	
C110	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C111	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C112	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C116	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C117	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C118	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C119	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C120	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C121	1-162-915-11	CERAMIC CHIP 10PF 0.5PF 50V	
C122	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C123	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C124	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C125	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C127	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C128	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C129	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C130	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C131	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C132	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C133	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C135	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C136	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C137	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C138	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C139	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C141	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C143	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C148	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C149	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C150	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C151	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C152	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C153	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C154	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C155	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	

Ref. No.	Part No.	Description			Remark
C156	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C157	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C158	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C159	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C160	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C161	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C162	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C163	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C164	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C165	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C166	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C167	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C168	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C170	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C171	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C172	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C173	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C174	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C175	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C179	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C180	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C181	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C200	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C201	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C202	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C203	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C204	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C205	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C206	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C207	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C209	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C210	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C211	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C212	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C213	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C214	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C215	1-164-392-11	CERAMIC CHIP	390PF	5%	50V
C216	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C217	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C218	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C219	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C220	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C221	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C222	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C223	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C224	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C225	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C226	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C227	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C228	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C229	1-104-912-11	TANTAL. CHIP	3.3uF	20%	16V
C231	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C233	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C234	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C238	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C241	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C243	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C245	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C301	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C302	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C303	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C304	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C305	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C306	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C307	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C308	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C309	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C310	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C400	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C401	1-128-004-11	ELECT CHIP	10uF	20%	16V
C402	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C403	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C404	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C405	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C406	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C407	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C408	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C409	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C411	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C412	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C413	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C414	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C415	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C416	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C417	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C418	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C419	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C420	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C421	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C422	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C423	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C427	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C428	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C429	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C430	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C431	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C436	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C439	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C440	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C441	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C442	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C443	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C444	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C445	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C447	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C448	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C449	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C450	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C451	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C452	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C453	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C455	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C456	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C457	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C458	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C469	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C471	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C476	1-135-201-11	TANTALUM CHIP	10uF	20%	4V

Ref. No.	Part No.	Description			Remark
C478	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C479	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C480	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C481	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C495	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C496	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C497	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C501	1-135-227-11	TANTAL. CHIP	100uF	20%	6.3V
C601	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C602	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C603	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C604	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C605	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C606	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C608	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C614	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C615	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C616	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C618	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C619	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C621	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C622	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C623	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C625	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C626	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C628	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C629	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C630	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C631	1-107-686-11	TANTAL. CHIP	4.7uF	20%	16V
C632	1-107-686-11	TANTAL. CHIP	4.7uF	20%	16V
C633	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C634	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C640	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C641	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C642	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C645	1-128-004-11	ELECT CHIP	10uF	20%	16V
C646	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C647	1-107-686-11	TANTAL. CHIP	4.7uF	20%	16V
C648	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C649	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C650	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C651	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C652	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C653	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C654	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C655	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C656	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C659	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C662	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C663	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C664	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C665	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C666	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C667	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C668	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C669	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C670	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C671	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C672	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C673	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

Ref. No.	Part No.	Description			Remark
C674	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C675	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C676	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C677	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C678	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C679	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C680	1-128-004-11	ELECT CHIP	10uF	20%	16V
C682	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C683	1-128-004-11	ELECT CHIP	10uF	20%	16V
C684	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C685	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C686	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C687	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C702	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C705	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C706	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C709	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C710	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C711	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C712	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C713	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C716	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C717	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C718	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C719	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C720	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C721	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C723	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C724	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C725	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C726	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C727	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C728	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C729	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C730	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C801	1-113-682-11	TANTAL. CHIP	33uF	20%	10V
C802	1-113-682-11	TANTAL. CHIP	33uF	20%	10V
C804	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C807	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C809	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C811	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C814	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C816	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C817	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C828	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C830	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C831	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C834	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C835	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C836	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C837	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C838	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C839	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C841	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C842	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C843	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C844	1-164-676-11	CERAMIC CHIP	0.0022uF	5%	16V
C845	1-164-392-11	CERAMIC CHIP	390PF	5%	50V
C847	1-164-392-11	CERAMIC CHIP	390PF	5%	50V
C848	1-104-847-11	TANTAL. CHIP	22uF	20%	4V

Ref. No.	Part No.	Description			Remark
C850	1-164-676-11	CERAMIC CHIP	0.0022uF	5%	16V
C851	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C852	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C853	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C854	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C857	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C858	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C901	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C902	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C903	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C904	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C905	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C906	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C907	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C908	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C909	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C910	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C911	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C912	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C913	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C914	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C915	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C916	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C917	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C918	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C919	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C920	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C921	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C922	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C923	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C924	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C925	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C926	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C928	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C951	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C952	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C953	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C954	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C959	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C960	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C961	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C962	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C963	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C964	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C967	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C968	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
* CN101	1-564-004-11	PIN, CONNECTOR 5P			
CN102	1-770-708-11	CONNECTOR, FFC/FPC 25P			
CN103	1-770-708-11	CONNECTOR, FFC/FPC 25P			
CN104	1-750-345-11	CONNECTOR, FFC/EPC (ZIF)			
CN105	1-750-345-11	CONNECTOR, FFC/EPC (ZIF)			
CN106	1-774-769-11	CONNECTOR, FFC/FPC 25P			
CN616	1-774-768-11	CONNECTOR, FFC/FPC 17P			
* CN702	1-564-005-11	PIN, CONNECTOR 6P			
		< TRIMMER >			
CT200	1-141-423-61	CAP, ADJ 20PF			

Ref. No.	Part No.	Description	Remark
CT401	1-141-422-11	CAP, ADJ 10PF	
		< DIODE >	
D200	8-719-041-39	DIODE KV1470	
D401	8-719-041-39	DIODE KV1470	
D402	8-719-041-39	DIODE KV1470	
D403	8-719-027-95	DIODE HSM88WK	
D404	8-719-027-95	DIODE HSM88WK	
D601	8-719-041-97	DIODE MA113-(TX)	
D606	8-713-101-85	DIODE 1T363-01-T8A	
D607	8-713-101-85	DIODE 1T363-01-T8A	
D608	8-713-101-85	DIODE 1T363-01-T8A	
D609	8-713-101-85	DIODE 1T363-01-T8A	
D802	8-719-041-97	DIODE MA113-(TX)	
		< FLUORESCENT INDICATOR >	
FL101	1-233-345-21	FILTER, LOW PASS (5.5MHz)	
FL102	1-233-345-21	FILTER, LOW PASS (5.5MHz)	
FL103	1-233-345-21	FILTER, LOW PASS (5.5MHz)	
FL606	1-406-416-11	COIL (OSC)	
		< IC >	
IC009	8-759-058-50	IC XRA10324AF	
IC010	8-759-058-50	IC XRA10324AF	
IC011	8-759-058-50	IC XRA10324AF	
IC012	8-759-058-50	IC XRA10324AF	
IC013	8-759-510-71	IC BA10358F-E2	
IC014	8-759-359-51	IC NJM431M(TE2)	
IC015	8-752-357-86	IC CXD2300Q-T4	
IC016	8-752-357-86	IC CXD2300Q-T4	
IC017	8-752-357-86	IC CXD2300Q-T4	
IC018	8-759-066-57	IC TC74HC4066AFS	
IC101	8-759-232-44	IC TC74HC125AF	
IC200	8-759-382-18	IC CXD2182AR	
IC201	8-759-382-18	IC CXD2182AR	
IC202	8-759-186-51	IC TC74VHC157F	
IC203	8-759-079-74	IC TC74VHC157FS(EL)	
IC204	8-759-079-52	IC TC74VHC08FS(EL)	
IC205	8-759-343-09	IC CXD2193AR-ER	
IC301	8-752-377-25	IC CXD2196R	
IC302	8-752-377-15	IC CXD1911Q	
IC401	8-759-327-31	IC CXD2183R (DSR-30P)	
IC402	8-759-327-05	IC CXD2184R	
IC403	8-759-426-26	IC CXD8608R	
IC404	8-752-375-34	IC CXK48V818R-T6	
IC405	8-752-375-34	IC CXK48V818R-T6	
IC406	8-759-328-28	IC ZA4024	
IC409	8-752-877-26	IC CXP911016-009R	
IC410	8-752-375-05	IC CXD2191R	
IC411	8-759-337-30	IC uPD482445LGW-B10-E2	
IC412	8-759-385-90	IC CXD2187AR	
IC413	8-759-368-81	IC TK11630UTL	
IC414	8-759-196-96	IC TC7SH08FU-TE85R	
IC610	8-759-357-72	IC NJU3712M(TE2)	
IC611	8-759-066-61	IC TC4053BFS	
IC612	8-759-362-16	IC CXD2913AQ	
IC613	8-759-908-16	IC TL072CPS	
IC615	8-759-269-12	IC SN74HCT08ANS	
IC620	8-759-082-58	IC TC7W08FU	

Ref. No.	Part No.	Description	Remark
IC621	8-759-239-55	IC TC74HC123AF	
IC644	8-752-374-96	IC CXD2190R	
IC646	8-759-337-74	IC HM62V256LT8Z	
IC650	8-759-081-48	IC TC74VHC08F	
IC655	8-759-272-05	IC TC74VHCT244F	
IC700	8-759-433-15	IC HD6433837TB13X	
IC701	8-759-430-56	IC CXD2194AR	
IC702	8-759-432-00	IC TSB11LV01PT-TEB	
IC801	8-759-359-51	IC NJM431M(TE2)	
IC802	8-759-357-74	IC TLC320AD58CDWR	
IC805	8-759-455-21	IC AK4321-VF-E2	
IC807	8-759-745-64	IC NJM4560M	
IC809	8-759-745-64	IC NJM4560M	
IC821	8-759-745-64	IC NJM4560M	
IC822	8-759-745-64	IC NJM4560M	
IC823	8-759-745-64	IC NJM4560M	
IC824	8-759-745-64	IC NJM4560M	
IC825	8-759-745-64	IC NJM4560M	
IC826	8-759-745-64	IC NJM4560M	
IC827	8-759-745-64	IC NJM4560M	
IC828	8-759-745-64	IC NJM4560M	
IC829	8-759-208-23	IC TC4053BF-TP2	
IC901	8-759-327-02	IC CXD2171R-T6	
IC902	8-752-365-06	IC CXK48324R-1	
IC903	8-752-376-25	IC CXK1206ATM-1-T6	
IC904	8-752-374-63	IC CXD2174R	
IC905	8-752-365-06	IC CXK48324R-1	
IC906	8-752-376-25	IC CXK1206ATM-1-T6	
IC907	8-752-375-93	IC CXD2173R	
IC908	8-759-058-64	IC TC7S32FU(TE85R)	
IC951	8-759-429-28	IC CXD8630R	
IC954	8-759-079-66	IC TC74VHC123AFS(EL)	
IC955	8-759-079-61	IC TC74VHC74FS(EL)	

< COIL >

Ref. No.	Part No.	Description	Remark
L011	1-414-398-11	INDUCTOR 10uH	
L012	1-414-398-11	INDUCTOR 10uH	
L013	1-414-398-11	INDUCTOR 10uH	
L014	1-414-398-11	INDUCTOR 10uH	
L015	1-414-398-11	INDUCTOR 10uH	
L016	1-414-398-11	INDUCTOR 10uH	
L017	1-414-398-11	INDUCTOR 10uH	
L018	1-414-398-11	INDUCTOR 10uH	
L102	1-414-398-11	INDUCTOR 10uH	
L200	1-414-398-11	INDUCTOR 10uH	
L201	1-414-398-11	INDUCTOR 10uH	
L202	1-410-390-11	INDUCTOR CHIP 56uH	
L203	1-414-398-11	INDUCTOR 10uH	
L204	1-414-398-11	INDUCTOR 10uH	
L205	1-411-275-21	COIL, VARIABLE	
L206	1-410-655-31	INDUCTOR CHIP 120uH	
L301	1-414-398-11	INDUCTOR 10uH	
L302	1-414-398-11	INDUCTOR 10uH	
L303	1-414-398-11	INDUCTOR 10uH	
L401	1-414-398-11	INDUCTOR 10uH	
L402	1-410-740-31	INDUCTOR CHIP 0.82uH	
L403	1-410-378-11	INDUCTOR CHIP 5.6uH	
L405	1-414-398-11	INDUCTOR 10uH	
L406	1-414-398-11	INDUCTOR 10uH	
L407	1-414-398-11	INDUCTOR 10uH	
L410	1-414-398-11	INDUCTOR 10uH	
L411	1-414-398-11	INDUCTOR 10uH	
L603	1-414-398-11	INDUCTOR 10uH	
L604	1-414-398-11	INDUCTOR 10uH	
L605	1-414-398-11	INDUCTOR 10uH	
L608	1-414-398-11	INDUCTOR 10uH	
L609	1-414-398-11	INDUCTOR 10uH	
L611	1-414-398-11	INDUCTOR 10uH	
L650	1-414-398-11	INDUCTOR 10uH	
L651	1-414-398-11	INDUCTOR 10uH	
L700	1-414-398-11	INDUCTOR 10uH	
L701	1-414-398-11	INDUCTOR 10uH	
L702	1-414-398-11	INDUCTOR 10uH	
L703	1-414-398-11	INDUCTOR 10uH	
L704	1-414-398-11	INDUCTOR 10uH	
L901	1-414-398-11	INDUCTOR 10uH	
L902	1-414-398-11	INDUCTOR 10uH	
L903	1-414-398-11	INDUCTOR 10uH	
L904	1-414-398-11	INDUCTOR 10uH	
L905	1-414-398-11	INDUCTOR 10uH	
L906	1-414-398-11	INDUCTOR 10uH	
L907	1-414-398-11	INDUCTOR 10uH	
L951	1-414-398-11	INDUCTOR 10uH	
L952	1-414-398-11	INDUCTOR 10uH	
L953	1-414-398-11	INDUCTOR 10uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q026	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q027	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q028	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q029	8-729-202-38	TRANSISTOR 2SC3326N-A	
Q030	8-729-202-38	TRANSISTOR 2SC3326N-A	
Q031	8-729-202-38	TRANSISTOR 2SC3326N-A	
Q032	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q033	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q034	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q035	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q036	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q037	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q039	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q040	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q041	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q042	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q043	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q044	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q045	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q046	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q047	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q048	8-729-402-42	TRANSISTOR UN5213	
Q200	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q201	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q401	8-729-402-42	TRANSISTOR UN5213	
Q606	8-729-402-42	TRANSISTOR UN5213	
Q607	8-729-402-42	TRANSISTOR UN5213	
Q650	8-729-015-76	TRANSISTOR UN5211	
Q652	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q655	8-729-422-54	TRANSISTOR XN4215	
Q656	8-729-422-54	TRANSISTOR XN4215	
Q813	8-729-015-76	TRANSISTOR UN5211	
Q814	8-729-015-74	TRANSISTOR UN5111	

Ref. No.	Part No.	Description			Remark
Q815	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q816	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q951	8-729-402-42	TRANSISTOR	UN5213		
		< RESISTOR >			
R001	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R002	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R003	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R004	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R005	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R006	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R007	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R008	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (DSR-30P)
R010	1-216-817-11	METAL CHIP	470	5%	1/16W
R101	1-216-833-11	METAL CHIP	10K	5%	1/16W
R102	1-216-821-11	METAL CHIP	1K	5%	1/16W
R103	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R107	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R108	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R113	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R115	1-216-837-11	METAL CHIP	22K	5%	1/16W
R116	1-216-837-11	METAL CHIP	22K	5%	1/16W
R117	1-216-837-11	METAL CHIP	22K	5%	1/16W
R118	1-216-821-11	METAL CHIP	1K	5%	1/16W
R119	1-216-821-11	METAL CHIP	1K	5%	1/16W
R120	1-216-821-11	METAL CHIP	1K	5%	1/16W
R124	1-216-833-11	METAL CHIP	10K	5%	1/16W
R125	1-216-833-11	METAL CHIP	10K	5%	1/16W
R126	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R127	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R128	1-216-809-11	METAL CHIP	100	5%	1/16W
R129	1-216-809-11	METAL CHIP	100	5%	1/16W
R130	1-216-809-11	METAL CHIP	100	5%	1/16W
R131	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R133	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R134	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R135	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R136	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R137	1-216-833-11	METAL CHIP	10K	5%	1/16W
R138	1-216-833-11	METAL CHIP	10K	5%	1/16W
R139	1-216-821-11	METAL CHIP	1K	5%	1/16W
R140	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R141	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R142	1-216-821-11	METAL CHIP	1K	5%	1/16W
R143	1-216-835-11	METAL CHIP	15K	5%	1/16W
R145	1-216-821-11	METAL CHIP	1K	5%	1/16W
R146	1-216-821-11	METAL CHIP	1K	5%	1/16W
R147	1-216-821-11	METAL CHIP	1K	5%	1/16W
R148	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R149	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R150	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R151	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R152	1-216-835-11	METAL CHIP	15K	5%	1/16W
R154	1-216-809-11	METAL CHIP	100	5%	1/16W
R155	1-216-809-11	METAL CHIP	100	5%	1/16W
R156	1-216-809-11	METAL CHIP	100	5%	1/16W
R157	1-216-864-11	METAL CHIP	0	5%	1/16W
R159	1-216-805-11	METAL CHIP	47	5%	1/16W

Ref. No.	Part No.	Description			Remark
R160	1-216-821-11	METAL CHIP	1K	5%	1/16W
R161	1-216-821-11	METAL CHIP	1K	5%	1/16W
R162	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R163	1-216-864-11	METAL CHIP	0	5%	1/16W
R164	1-216-816-11	METAL CHIP	390	5%	1/16W
R165	1-216-864-11	METAL CHIP	0	5%	1/16W
R166	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R167	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R168	1-216-835-11	METAL CHIP	15K	5%	1/16W
R169	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R170	1-216-864-11	METAL CHIP	0	5%	1/16W
R173	1-216-821-11	METAL CHIP	1K	5%	1/16W
R174	1-216-821-11	METAL CHIP	1K	5%	1/16W
R175	1-216-813-11	METAL CHIP	220	5%	1/16W
R176	1-216-821-11	METAL CHIP	1K	5%	1/16W
R177	1-216-821-11	METAL CHIP	1K	5%	1/16W
R178	1-216-817-11	METAL CHIP	470	5%	1/16W
R182	1-216-821-11	METAL CHIP	1K	5%	1/16W
R183	1-216-821-11	METAL CHIP	1K	5%	1/16W
R184	1-216-817-11	METAL CHIP	470	5%	1/16W
R185	1-216-821-11	METAL CHIP	1K	5%	1/16W
R186	1-216-821-11	METAL CHIP	1K	5%	1/16W
R187	1-216-813-11	METAL CHIP	220	5%	1/16W
R192	1-216-821-11	METAL CHIP	1K	5%	1/16W
R193	1-216-821-11	METAL CHIP	1K	5%	1/16W
R194	1-216-821-11	METAL CHIP	1K	5%	1/16W
R200	1-216-864-11	METAL CHIP	0	5%	1/16W
R201	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R202	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R209	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R210	1-216-864-11	METAL CHIP	0	5%	1/16W
R212	1-216-864-11	METAL CHIP	0	5%	1/16W
R214	1-216-833-11	METAL CHIP	10K	5%	1/16W
R215	1-216-840-11	METAL CHIP	39K	5%	1/16W
R246	1-216-864-11	METAL CHIP	0	5%	1/16W
R247	1-216-821-11	METAL CHIP	1K	5%	1/16W
R248	1-216-817-11	METAL CHIP	470	5%	1/16W
R249	1-216-817-11	METAL CHIP	470	5%	1/16W
R250	1-216-821-11	METAL CHIP	1K	5%	1/16W
R251	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R255	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R256	1-216-833-11	METAL CHIP	10K	5%	1/16W
R257	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R259	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R260	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R261	1-216-814-11	METAL CHIP	270	5%	1/16W
R262	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R264	1-216-833-11	METAL CHIP	10K	5%	1/16W
R266	1-216-833-11	METAL CHIP	10K	5%	1/16W
R268	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R269	1-216-814-11	METAL CHIP	270	5%	1/16W
R270	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R271	1-216-864-11	METAL CHIP	0	5%	1/16W
R272	1-216-855-11	METAL CHIP	680K	5%	1/16W
R273	1-216-839-11	METAL CHIP	33K	5%	1/16W
R274	1-216-864-11	METAL CHIP	0	5%	1/16W

Ref. No.	Part No.	Description			Remark
R276	1-216-833-11	METAL CHIP	10K	5%	1/16W
R277	1-216-839-11	METAL CHIP	33K	5%	1/16W
R278	1-216-864-11	METAL CHIP	0	5%	1/16W
R279	1-216-839-11	METAL CHIP	33K	5%	1/16W
R280	1-216-833-11	METAL CHIP	10K	5%	1/16W
R281	1-216-821-11	METAL CHIP	1K	5%	1/16W
R282	1-216-839-11	METAL CHIP	33K	5%	1/16W
R285	1-216-864-11	METAL CHIP	0	5%	1/16W
R286	1-216-833-11	METAL CHIP	10K	5%	1/16W
R288	1-216-833-11	METAL CHIP	10K	5%	1/16W
R292	1-216-833-11	METAL CHIP	10K	5%	1/16W
R293	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R304	1-216-833-11	METAL CHIP	10K	5%	1/16W
R305	1-216-833-11	METAL CHIP	10K	5%	1/16W
R306	1-216-864-11	METAL CHIP	0	5%	1/16W
R308	1-216-833-11	METAL CHIP	10K	5%	1/16W
R309	1-216-864-11	METAL CHIP	0	5%	1/16W
R310	1-216-833-11	METAL CHIP	10K	5%	1/16W
R311	1-216-864-11	METAL CHIP	0	5%	1/16W
R312	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R313	1-216-833-11	METAL CHIP	10K	5%	1/16W
R314	1-216-864-11	METAL CHIP	0	5%	1/16W
R315	1-216-833-11	METAL CHIP	10K	5%	1/16W
R316	1-216-864-11	METAL CHIP	0	5%	1/16W
R317	1-216-813-11	METAL CHIP	220	5%	1/16W
R318	1-216-833-11	METAL CHIP	10K	5%	1/16W
R319	1-216-864-11	METAL CHIP	0	5%	1/16W
R321	1-216-813-11	METAL CHIP	220	5%	1/16W
R322	1-216-813-11	METAL CHIP	220	5%	1/16W
R324	1-216-833-11	METAL CHIP	10K	5%	1/16W
R337	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R338	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R339	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R340	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R341	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R400	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R401	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R403	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R405	1-216-864-11	METAL CHIP	0	5%	1/16W
R408	1-216-864-11	METAL CHIP	0	5%	1/16W
R409	1-216-821-11	METAL CHIP	1K	5%	1/16W
R414	1-216-821-11	METAL CHIP	1K	5%	1/16W
R419	1-216-821-11	METAL CHIP	1K	5%	1/16W
R420	1-216-821-11	METAL CHIP	1K	5%	1/16W
R421	1-216-821-11	METAL CHIP	1K	5%	1/16W
R422	1-216-821-11	METAL CHIP	1K	5%	1/16W
R423	1-216-821-11	METAL CHIP	1K	5%	1/16W
R424	1-216-821-11	METAL CHIP	1K	5%	1/16W
R426	1-216-805-11	METAL CHIP	47	5%	1/16W
R427	1-216-805-11	METAL CHIP	47	5%	1/16W
R428	1-216-833-11	METAL CHIP	10K	5%	1/16W
R429	1-216-833-11	METAL CHIP	10K	5%	1/16W
R430	1-216-817-11	METAL CHIP	470	5%	1/16W
R431	1-216-833-11	METAL CHIP	10K	5%	1/16W
R432	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R433	1-216-805-11	METAL CHIP	47	5%	1/16W
R434	1-216-833-11	METAL CHIP	10K	5%	1/16W
R435	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R436	1-216-857-11	METAL CHIP	1M	5%	1/16W
R437	1-216-815-11	METAL CHIP	330	5%	1/16W
R438	1-216-833-11	METAL CHIP	10K	5%	1/16W
R439	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R440	1-216-833-11	METAL CHIP	10K	5%	1/16W
R441	1-216-805-11	METAL CHIP	47	5%	1/16W
R442	1-216-805-11	METAL CHIP	47	5%	1/16W
R443	1-216-805-11	METAL CHIP	47	5%	1/16W
R444	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R445	1-216-821-11	METAL CHIP	1K	5%	1/16W
R454	1-216-845-11	METAL CHIP	100K	5%	1/16W
R455	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R462	1-216-821-11	METAL CHIP	1K	5%	1/16W
R464	1-216-833-11	METAL CHIP	10K	5%	1/16W
R471	1-216-833-11	METAL CHIP	10K	5%	1/16W
R473	1-216-833-11	METAL CHIP	10K	5%	1/16W
R474	1-216-864-11	METAL CHIP	0	5%	1/16W
R476	1-216-833-11	METAL CHIP	10K	5%	1/16W
R477	1-216-864-11	METAL CHIP	0	5%	1/16W
R479	1-216-864-11	METAL CHIP	0	5%	1/16W
R481	1-216-833-11	METAL CHIP	10K	5%	1/16W
R492	1-216-833-11	METAL CHIP	10K	5%	1/16W
R493	1-216-864-11	METAL CHIP	0	5%	1/16W
R494	1-216-864-11	METAL CHIP	0	5%	1/16W
R505	1-216-833-11	METAL CHIP	10K	5%	1/16W
R510	1-216-841-11	METAL CHIP	47K	5%	1/16W
R511	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R512	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R513	1-216-833-11	METAL CHIP	10K	5%	1/16W
R514	1-216-833-11	METAL CHIP	10K	5%	1/16W
R515	1-216-809-11	METAL CHIP	100	5%	1/16W
R516	1-216-809-11	METAL CHIP	100	5%	1/16W
R517	1-216-833-11	METAL CHIP	10K	5%	1/16W
R518	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R519	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R520	1-216-864-11	METAL CHIP	0	5%	1/16W
R524	1-216-864-11	METAL CHIP	0	5%	1/16W
R525	1-216-833-11	METAL CHIP	10K	5%	1/16W
R530	1-216-864-11	METAL CHIP	0	5%	1/16W
R600	1-216-833-11	METAL CHIP	10K	5%	1/16W
R601	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R602	1-216-833-11	METAL CHIP	10K	5%	1/16W
R603	1-216-833-11	METAL CHIP	10K	5%	1/16W
R604	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R605	1-216-833-11	METAL CHIP	10K	5%	1/16W
R613	1-216-833-11	METAL CHIP	10K	5%	1/16W
R614	1-216-864-11	METAL CHIP	0	5%	1/16W
R616	1-216-833-11	METAL CHIP	10K	5%	1/16W
R617	1-216-833-11	METAL CHIP	10K	5%	1/16W
R619	1-216-845-11	METAL CHIP	100K	5%	1/16W
R620	1-216-833-11	METAL CHIP	10K	5%	1/16W
R621	1-216-845-11	METAL CHIP	100K	5%	1/16W
R622	1-216-837-11	METAL CHIP	22K	5%	1/16W
R623	1-216-821-11	METAL CHIP	1K	5%	1/16W
R624	1-216-841-11	METAL CHIP	47K	5%	1/16W
R625	1-216-817-11	METAL CHIP	470	5%	1/16W
R626	1-216-864-11	METAL CHIP	0	5%	1/16W
R628	1-216-845-11	METAL CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R629	1-216-841-11	METAL CHIP	47K	5%	1/16W
R630	1-216-821-11	METAL CHIP	1K	5%	1/16W
R631	1-216-838-11	METAL CHIP	27K	5%	1/16W
R633	1-216-841-11	METAL CHIP	47K	5%	1/16W
R634	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
R635	1-216-833-11	METAL CHIP	10K	5%	1/16W
R636	1-216-838-11	METAL CHIP	27K	5%	1/16W
R637	1-216-864-11	METAL CHIP	0	5%	1/16W
R640	1-216-864-11	METAL CHIP	0	5%	1/16W
R642	1-216-857-11	METAL CHIP	1M	5%	1/16W
R648	1-218-290-11	METAL GLAZE	6.2K	5%	1/16W
R649	1-218-290-11	METAL GLAZE	6.2K	5%	1/16W
R650	1-216-864-11	METAL CHIP	0	5%	1/16W
R651	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R652	1-216-805-11	METAL CHIP	47	5%	1/16W
R653	1-216-833-11	METAL CHIP	10K	5%	1/16W
R654	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R655	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R658	1-216-833-11	METAL CHIP	10K	5%	1/16W
R659	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R660	1-216-833-11	METAL CHIP	10K	5%	1/16W
R669	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R670	1-216-833-11	METAL CHIP	10K	5%	1/16W
R672	1-216-833-11	METAL CHIP	10K	5%	1/16W
R673	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R674	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R675	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R676	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R677	1-218-293-11	METAL GLAZE	24K	5%	1/16W
R678	1-216-847-11	METAL CHIP	150K	5%	1/16W
R679	1-216-813-11	METAL CHIP	220	5%	1/16W
R680	1-216-817-11	METAL CHIP	470	5%	1/16W
R683	1-216-833-11	METAL CHIP	10K	5%	1/16W
R685	1-216-809-11	METAL CHIP	100	5%	1/16W
R686	1-216-841-11	METAL CHIP	47K	5%	1/16W
R687	1-216-817-11	METAL CHIP	470	5%	1/16W
R688	1-218-332-11	METAL GLAZE	130K	5%	1/16W
R699	1-216-864-11	METAL CHIP	0	5%	1/16W
R700	1-216-833-11	METAL CHIP	10K	5%	1/16W
R703	1-216-845-11	METAL CHIP	100K	5%	1/16W
R704	1-216-833-11	METAL CHIP	10K	5%	1/16W
R705	1-216-833-11	METAL CHIP	10K	5%	1/16W
R706	1-216-838-11	METAL CHIP	27K	5%	1/16W
R712	1-216-864-11	METAL CHIP	0	5%	1/16W
R713	1-216-864-11	METAL CHIP	0	5%	1/16W
R716	1-216-864-11	METAL CHIP	0	5%	1/16W
R718	1-216-845-11	METAL CHIP	100K	5%	1/16W
R719	1-216-837-11	METAL CHIP	22K	5%	1/16W
R721	1-216-837-11	METAL CHIP	22K	5%	1/16W
R722	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R723	1-216-864-11	METAL CHIP	0	5%	1/16W
R726	1-216-833-11	METAL CHIP	10K	5%	1/16W
R727	1-216-833-11	METAL CHIP	10K	5%	1/16W
R732	1-218-873-11	METAL GLAZE	12K	0.50%	1/16W
R733	1-216-864-11	METAL CHIP	0	5%	1/16W
R735	1-216-864-11	METAL CHIP	0	5%	1/16W
R736	1-218-873-11	METAL GLAZE	12K	0.50%	1/16W
R737	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R738	1-211-987-11	METAL GLAZE	56	0.50%	1/16W
R739	1-211-987-11	METAL GLAZE	56	0.50%	1/16W
R740	1-211-987-11	METAL GLAZE	56	0.50%	1/16W
R741	1-211-987-11	METAL GLAZE	56	0.50%	1/16W
R742	1-216-833-11	METAL CHIP	10K	5%	1/16W
R746	1-216-864-11	METAL CHIP	0	5%	1/16W
R747	1-216-837-11	METAL CHIP	22K	5%	1/16W
R749	1-216-833-11	METAL CHIP	10K	5%	1/16W
R750	1-216-864-11	METAL CHIP	0	5%	1/16W
R751	1-216-833-11	METAL CHIP	10K	5%	1/16W
R762	1-216-857-11	METAL CHIP	1M	5%	1/16W
R763	1-216-845-11	METAL CHIP	100K	5%	1/16W
R764	1-216-833-11	METAL CHIP	10K	5%	1/16W
R765	1-216-821-11	METAL CHIP	1K	5%	1/16W
R766	1-216-833-11	METAL CHIP	10K	5%	1/16W
R767	1-216-833-11	METAL CHIP	10K	5%	1/16W
R777	1-216-833-11	METAL CHIP	10K	5%	1/16W
R800	1-218-332-11	METAL GLAZE	130K	5%	1/16W
R801	1-218-332-11	METAL GLAZE	130K	5%	1/16W
R802	1-218-332-11	METAL GLAZE	130K	5%	1/16W
R803	1-216-864-11	METAL CHIP	0	5%	1/16W
R804	1-216-864-11	METAL CHIP	0	5%	1/16W
R805	1-216-833-11	METAL CHIP	10K	5%	1/16W
R806	1-216-864-11	METAL CHIP	0	5%	1/16W
R807	1-216-864-11	METAL CHIP	0	5%	1/16W
R808	1-216-797-11	METAL CHIP	10	5%	1/16W
R809	1-216-864-11	METAL CHIP	0	5%	1/16W
R811	1-216-864-11	METAL CHIP	0	5%	1/16W
R812	1-216-809-11	METAL CHIP	100	5%	1/16W
R813	1-216-809-11	METAL CHIP	100	5%	1/16W
R815	1-216-833-11	METAL CHIP	10K	5%	1/16W
R816	1-216-833-11	METAL CHIP	10K	5%	1/16W
R817	1-216-864-11	METAL CHIP	0	5%	1/16W
R818	1-216-833-11	METAL CHIP	10K	5%	1/16W
R819	1-216-841-11	METAL CHIP	47K	5%	1/16W
R820	1-216-810-11	METAL CHIP	120	5%	1/16W
R821	1-216-805-11	METAL CHIP	47	5%	1/16W
R822	1-216-864-11	METAL CHIP	0	5%	1/16W
R823	1-216-805-11	METAL CHIP	47	5%	1/16W
R824	1-216-864-11	METAL CHIP	0	5%	1/16W
R825	1-216-841-11	METAL CHIP	47K	5%	1/16W
R826	1-216-841-11	METAL CHIP	47K	5%	1/16W
R827	1-216-864-11	METAL CHIP	0	5%	1/16W
R828	1-216-841-11	METAL CHIP	47K	5%	1/16W
R829	1-216-819-11	METAL CHIP	680	5%	1/16W
R830	1-216-864-11	METAL CHIP	0	5%	1/16W
R831	1-216-819-11	METAL CHIP	680	5%	1/16W
R840	1-216-845-11	METAL CHIP	100K	5%	1/16W
R841	1-216-845-11	METAL CHIP	100K	5%	1/16W
R842	1-216-845-11	METAL CHIP	100K	5%	1/16W
R843	1-216-845-11	METAL CHIP	100K	5%	1/16W
R844	1-216-833-11	METAL CHIP	10K	5%	1/16W
R846	1-216-864-11	METAL CHIP	0	5%	1/16W
R847	1-216-864-11	METAL CHIP	0	5%	1/16W
R848	1-216-864-11	METAL CHIP	0	5%	1/16W
R849	1-216-833-11	METAL CHIP	10K	5%	1/16W
R851	1-216-864-11	METAL CHIP	0	5%	1/16W
R852	1-216-833-11	METAL CHIP	10K	5%	1/16W
R853	1-216-833-11	METAL CHIP	10K	5%	1/16W
R865	1-216-864-11	METAL CHIP	0	5%	1/16W
R866	1-216-864-11	METAL CHIP	0	5%	1/16W
R870	1-216-864-11	METAL CHIP	0	5%	1/16W

Ref. No.	Part No.	Description			Remark
R871	1-216-833-11	METAL CHIP	10K	5%	1/16W
R872	1-216-834-11	METAL CHIP	12K	5%	1/16W
R874	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R875	1-216-864-11	METAL CHIP	0	5%	1/16W
R877	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R878	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R880	1-216-833-11	METAL CHIP	10K	5%	1/16W
R884	1-216-833-11	METAL CHIP	10K	5%	1/16W
R885	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R890	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R891	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R892	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R893	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R894	1-216-840-11	METAL CHIP	39K	5%	1/16W
R895	1-216-840-11	METAL CHIP	39K	5%	1/16W
R896	1-216-840-11	METAL CHIP	39K	5%	1/16W
R897	1-216-840-11	METAL CHIP	39K	5%	1/16W
R898	1-216-833-11	METAL CHIP	10K	5%	1/16W
R899	1-218-293-11	METAL GLAZE	24K	5%	1/16W
R901	1-216-833-11	METAL CHIP	10K	5%	1/16W
R902	1-216-864-11	METAL CHIP	0	5%	1/16W
R950	1-218-883-11	METAL GLAZE	33K	0.50%	1/16W
R959	1-216-864-11	METAL CHIP	0	5%	1/16W
R962	1-216-864-11	METAL CHIP	0	5%	1/16W
R964	1-216-864-11	METAL CHIP	0	5%	1/16W
R965	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R966	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R967	1-216-864-11	METAL CHIP	0	5%	1/16W
R970	1-216-864-11	METAL CHIP	0	5%	1/16W
R971	1-216-864-11	METAL CHIP	0	5%	1/16W
R972	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R973	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R974	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R975	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R976	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R977	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R979	1-216-864-11	METAL CHIP	0	5%	1/16W
R980	1-216-864-11	METAL CHIP	0	5%	1/16W
R981	1-216-864-11	METAL CHIP	0	5%	1/16W
R985	1-216-864-11	METAL CHIP	0	5%	1/16W
R990	1-216-864-11	METAL CHIP	0	5%	1/16W
R993	1-216-864-11	METAL CHIP	0	5%	1/16W
R995	1-216-864-11	METAL CHIP	0	5%	1/16W
R996	1-216-864-11	METAL CHIP	0	5%	1/16W
R997	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R998	1-216-833-11	METAL CHIP	10K	5%	1/16W
R999	1-216-864-11	METAL CHIP	0	5%	1/16W

< COMPOSITION CIRCUIT BLOCK >

Ref. No.	Part No.	Description
RB100	1-216-295-91	CONDUCTOR, CHIP (2012)
RB701	1-236-908-11	NETWORK RESISTOR (CHIP) 10K
RB702	1-236-908-11	NETWORK RESISTOR (CHIP) 10K
RB703	1-236-908-11	NETWORK RESISTOR (CHIP) 10K
RB704	1-236-908-11	NETWORK RESISTOR (CHIP) 10K
RB705	1-236-908-11	NETWORK RESISTOR (CHIP) 10K
RB706	1-236-908-11	NETWORK RESISTOR (CHIP) 10K

< COMPOSITION CIRCUIT BLOCK >

Ref. No.	Part No.	Description	Remark
RB401	1-239-711-11	NETWORK RESISTOR (CHIP) 0 (DSR-30)	
RB402	1-239-711-11	NETWORK RESISTOR (CHIP) 0 (DSR-30)	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description
RV1	1-238-855-11	RES, ADJ, CERMET 4.7K
RV2	1-238-855-11	RES, ADJ, CERMET 4.7K
RV4	1-238-852-11	RES, ADJ, CERMET 470
RV5	1-238-852-11	RES, ADJ, CERMET 470

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description
RV010	1-238-854-11	RES, ADJ, CERMET 2.2K
RV011	1-238-853-11	RES, ADJ, CERMET 1K
RV012	1-238-854-11	RES, ADJ, CERMET 2.2K
RV200	1-238-855-11	RES, ADJ, CERMET 4.7K
RV301	1-238-853-11	RES, ADJ, CERMET 1K

< VIBRATOR >

Ref. No.	Part No.	Description
X401	1-760-654-21	VIBRATOR, CRYSTAL (13.5MHz)
X402	1-760-655-21	VIBRATOR, CRYSTAL (20MHz)
X700	1-760-497-21	VIBRATOR, LITHIUM NIOBATE (6MHz)
X701	1-579-922-11	VIBRATOR, CRYSTAL (CHIP TYPE)(24.576MHz)

MD-63 BOARD, COMPLETE

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(Ref No. 7,000 Series)

< CAPACITOR >

Ref. No.	Part No.	Description			
C101	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C102	1-163-031-11	CERAMIC CHIP	0.01uF		50V

< CONNECTOR >

Ref. No.	Part No.	Description
CN101	1-770-646-11	CONNECTOR, FFC/FPC 16P

< DIODE >

Ref. No.	Part No.	Description
D101	8-719-989-52	DIODE GL4600S

< IC >

Ref. No.	Part No.	Description
IC101	8-719-820-44	IC PHOTO COUPLER TLP907-0 (SONY2)
IC102	8-719-820-44	IC PHOTO COUPLER TLP907-0 (SONY2)
IC103	8-759-510-71	IC BA10358F-E2
IC105	8-719-821-03	IC ELEMENT, HALL THS117-TE85L

< JUMPER RESISTOR >

Ref. No.	Part No.	Description
JR101	1-216-296-91	CONDUCTOR, CHIP (3216)
JR102	1-216-296-91	CONDUCTOR, CHIP (3216)
JR103	1-216-296-91	CONDUCTOR, CHIP (3216)
JR104	1-216-296-91	CONDUCTOR, CHIP (3216)
JR105	1-216-296-91	CONDUCTOR, CHIP (3216)

< TRANSISTOR >

Ref. No.	Part No.	Description
Q102	8-729-012-46	PHOTO TRANSISTOR PT4600FS

< RESISTOR >

Ref. No.	Part No.	Description			
R101	1-216-031-00	METAL CHIP	180	5%	1/10W
R102	1-216-081-00	METAL CHIP	22K	5%	1/10W
R103	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R107	1-216-069-00	METAL CHIP	6.8K	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
R108	1-216-047-91	METAL GLAZE	820	5%	1/10W
R109	1-216-081-00	METAL CHIP	22K	5%	1/10W
		< VARIABLE RESISTOR >			
RV101	1-238-858-11	RES, ADJ, CERMET 47K			
RV102	1-238-862-11	RES, ADJ, CERMET 1M			
		< SWITCH >			
S101	1-572-719-11	SWITCH, PUSH (1 KEY)(C OUT SW)			

Ref. No.	Part No.	Description			Remark
		MD-64 BOARD, COMPLETE			
		**********************			
					(Ref No. 7,000 Series)
		< CAPACITOR >			
C001	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C002	1-163-031-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
CN002	1-770-692-11	CONNECTOR, FFC/FPC 9P			
		< IC >			
IC003	8-719-820-44	IC PHOTO COUPLER TLP907-0(SONY2)			
IC004	8-719-820-44	IC PHOTO COUPLER TLP907-0(SONY2)			
IC005	8-759-510-71	IC BA10358F-E2			
IC006	8-719-821-03	IC ELEMENT, HALL THS117-TE85L			
		< JUMPER RESISTOR >			
JR001	1-216-296-91	CONDUCTOR, CHIP (3216)			
JR002	1-216-296-91	CONDUCTOR, CHIP (3216)			
		< TRANSISTOR >			
Q1	8-729-012-46	PHOTO TRANSISTOR PT4600FS			
		< RESISTOR >			
R002	1-216-031-00	METAL CHIP	180	5%	1/10W
R003	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R004	1-216-081-00	METAL CHIP	22K	5%	1/10W
R005	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R007	1-216-081-00	METAL CHIP	22K	5%	1/10W
R008	1-216-047-91	METAL GLAZE	820	5%	1/10W
		< VARIABLE RESISTOR >			
RV001	1-238-858-11	RES, ADJ, CERMET 47K			
RV002	1-238-862-11	RES, ADJ, CERMET 1M			
		< SWITCH >			
S002	1-762-558-11	SWITCH, PUSH (CC DOWN SW)			

Ref. No.	Part No.	Description			Remark
		MD-65 BOARD, COMPLETE			
		**********************			
					(Ref No. 7,000 Series)
		< CONNECTOR >			
CN201	1-766-830-21	CONNECTOR, FFC/FPC (ZIF) 11P			
CN202	1-774-771-11	CONNECTOR, FFC/FPC 14P			
CN203	1-506-467-11	PIN, CONNECTOR 2P			
CN204	1-750-620-11	CONNECTOR (MM8 MD)			
		< JUMPER RESISTOR >			
JR201	1-216-296-91	CONDUCTOR, CHIP (3216)			

Ref. No.	Part No.	Description			Remark
⚠CP100	1-468-087-12	POWER BLOCK (SOPS-2009)(DSR-30)			
		********************************			
					(Ref. No. 10,000 Series)
	7-682-648-09	SCREW +PS 3X8 (SWCH.CZN-N)			
		< CAPACITOR >			
⚠C101	1-136-203-11	FILM	0.01uF	10%	630V
⚠C102	1-126-964-11	ELECT	10uF	20%	50V
⚠C103	1-130-483-00	FILM	0.01uF	5%	50V
⚠C104	1-130-471-00	FILM	1000PF	5%	50V
⚠C105	1-136-203-11	FILM	0.01uF	10%	630V
⚠C201	1-111-019-11	ELECT	2200uF	20%	10V
⚠C202	1-110-399-91	ELECT	1500uF		10V
⚠C203	1-110-399-91	ELECT	1500uF		10V
⚠C204	1-126-241-11	ELECT	1500uF	20%	16V
⚠C205	1-124-571-00	ELECT	270uF	20%	25V
⚠C206	1-124-534-11	ELECT	680uF	20%	16V
⚠C209	1-136-171-00	FILM	0.33uF	5%	50V
		< CONNECTOR >			
⚠CN101	1-770-498-11	PIN, CONNECTOR 5P			
⚠CN201	1-750-071-11	PIN, CONNECTOR 8P			
		< DIODE >			
⚠D101	8-719-030-48	DIODE 1JH46-TPA3			
⚠D201	8-719-052-37	DIODE F10P04Q			
⚠D202	8-719-052-37	DIODE F10P04Q			
⚠D203	8-719-053-92	DIODE F10P06Q			
⚠D204	8-719-057-50	DIODE 21DQ10-FC4			
⚠D205	8-719-057-49	DIODE 21DQ06-FC4			
⚠D206	8-719-118-97	DIODE RD16F-T7B2			
		< FERRITE BEAD >			
⚠FB101	1-414-372-11	INDUCTOR, BEAD LFP3A-M3AOTC			
		< IC >			
⚠IC201	8-759-420-19	IC AN1431T			
		<PHOTO COUPLER>			
⚠PH101	8-749-010-64	PHOTO COUPLER PC123F2			
		< IC LINK >			
⚠PS201	1-532-984-11	IC LINK (ICP-N50 2.0A)			
⚠PS202	1-532-984-11	IC LINK (ICP-N50 2.0A)			
		< TRANSISTOR >			
⚠Q101	8-729-035-29	FET 2SK2545			
⚠Q102	8-729-807-81	TRANSISTOR 2SC3383-S			
⚠Q103	8-729-807-81	TRANSISTOR 2SC3383-S			

POWER BLOCK

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description				Remark
		< RESISTOR >				
⚠R101	1-249-377-11	CARBON	0.47	5%	1/4W	F
⚠R102	1-247-883-00	CARBON	150K	5%	1/4W	
⚠R103	1-247-883-00	CARBON	150K	5%	1/4W	
⚠R104	1-249-435-11	CARBON	33K	5%	1/4W	F
⚠R105	1-215-884-11	METAL	47	5%	2W	F
⚠R106	1-247-807-31	CARBON	100	5%	1/4W	
⚠R107	1-249-385-11	CARBON	2.2	5%	1/4W	F
⚠R108	1-249-441-11	CARBON	100K	5%	1/4W	F
⚠R109	1-247-791-91	CARBON	22	5%	1/4W	
⚠R110	1-216-341-11	METAL	0.22	5%	1W	F
⚠R111	1-215-904-11	METAL	100K	5%	2W	F
⚠R112	1-215-904-11	METAL	100K	5%	2W	F
⚠R113	1-215-904-11	METAL	100K	5%	2W	F
⚠R114	1-247-807-31	CARBON	100	5%	1/4W	
⚠R115	1-249-377-11	CARBON	0.47	5%	1/4W	F
⚠R116	1-249-385-11	CARBON	2.2	5%	1/4W	F
⚠R117	1-249-385-11	CARBON	2.2	5%	1/4W	F
⚠R201	1-215-411-00	METAL	390	1%	1/4W	
⚠R202	1-215-407-00	METAL	270	1%	1/4W	
⚠R203	1-249-427-11	CARBON	6.8K	5%	1/4W	F
⚠R204	1-249-429-11	CARBON	10K	5%	1/4W	F
⚠R205	1-249-426-11	CARBON	5.6K	5%	1/4W	F
⚠R207	1-249-430-11	CARBON	12K	5%	1/4W	F
⚠R208	1-249-412-11	CARBON	390	5%	1/4W	F
⚠R209	1-249-413-11	CARBON	470	5%	1/4W	F
⚠R210	1-247-807-31	CARBON	100	5%	1/4W	
		< TRANSFORMER >				
⚠T101	1-429-442-21	TRANSFORMER, CONVERTER				

Ref. No.	Part No.	Description				Remark
⚠CP100	1-468-108-11	POWER BLOCK (SOPS-2010)(DSR-30P)				
		********************************				
						(Ref. No. 10,000 Series)
	7-682-648-09	SCREW +PS 3X8 (SWCH.CZN-N)				
		< CAPACITOR >				
⚠C101	1-136-203-11	FILM	0.01uF	10%	630V	
⚠C102	1-124-925-11	ELECT	2.2uF	20%	100V	
⚠C103	1-130-487-00	FILM	0.022uF	5%	50V	
⚠C104	1-130-477-00	FILM	3300PF	5%	50V	
⚠C105	1-136-203-11	FILM	0.01uF	10%	630V	
⚠C201	1-124-760-11	ELECT	2200uF	20%	10V	
⚠C202	1-111-017-51	ELECT	1500uF	20%	10V	
⚠C203	1-111-017-51	ELECT	1500uF	20%	10V	
⚠C204	1-111-043-11	ELECT	1500uF	20%	16V	
⚠C206	1-111-036-11	ELECT	470uF	20%	16V	
⚠C209	1-136-165-00	FILM	0.1uF	5%	50V	
		< CONNECTOR >				
⚠CN101	1-770-498-11	PIN, CONNECTOR 5P				
⚠CN201	1-750-071-11	PIN, CONNECTOR 8P				
		< DIODE >				
⚠D101	8-719-058-73	DIODE 05NU42-TPA3				
⚠D201	8-719-052-37	DIODE F10P04Q				
⚠D202	8-719-052-37	DIODE F10P04Q				
⚠D203	8-719-053-92	DIODE F10P06Q				
⚠D205	8-719-057-49	DIODE 21DQ06-FC4				
⚠D206	8-719-118-97	DIODE RD16F-T7B2				
		< FERRITE BEAD >				
⚠FB101	1-414-372-11	INDUCTOR, BEAD LFP3A-M3A0TC				
		< IC >				
⚠IC201	8-759-420-19	IC AN1431T				
		<PHOTO INTERUPTER>				
⚠PH101	8-749-010-64	PHOTO COUPLER PC123F2				
		< IC LINK >				
⚠PS201	1-532-984-11	IC LINK (ICP-N50 2.0A)				
⚠PS202	1-532-984-11	IC LINK (ICP-N50 2.0A)				
		< TRANSISTOR >				
⚠Q101	8-729-036-34	FET 2SK2605				
⚠Q102	8-729-807-81	TRANSISTOR 2SC3383-S				
⚠Q103	8-729-807-81	TRANSISTOR 2SC3383-S				
		< RESISTOR >				
⚠R102	1-247-895-00	CARBON	470K	5%	1/4W	
⚠R103	1-247-895-00	CARBON	470K	5%	1/4W	
⚠R104	1-249-435-11	CARBON	33K	5%	1/4W	F
⚠R105	1-215-884-11	METAL	47	5%	2W	F
⚠R106	1-247-807-31	CARBON	100	5%	1/4W	
⚠R107	1-249-385-11	CARBON	2.2	5%	1/4W	F
⚠R108	1-249-441-11	CARBON	100K	5%	1/4W	F
⚠R109	1-247-791-91	CARBON	22	5%	1/4W	
⚠R110	1-216-345-11	METAL	0.47	5%	1W	F
⚠R111	1-215-900-11	METAL	22K	5%	2W	F
⚠R112	1-215-900-11	METAL	22K	5%	2W	F
⚠R113	1-215-900-11	METAL	22K	5%	2W	F
⚠R114	1-247-807-31	CARBON	100	5%	1/4W	
⚠R115	1-249-377-11	CARBON	0.47	5%	1/4W	F
⚠R116	1-249-385-11	CARBON	2.2	5%	1/4W	F
⚠R117	1-249-385-11	CARBON	2.2	5%	1/4W	F
⚠R201	1-215-411-00	METAL	390	1%	1/4W	
⚠R202	1-215-407-00	METAL	270	1%	1/4W	
⚠R203	1-249-425-11	CARBON	4.7K	5%	1/4W	F
⚠R204	1-249-429-11	CARBON	10K	5%	1/4W	F
⚠R205	1-249-426-11	CARBON	5.6K	5%	1/4W	F
⚠R207	1-249-430-11	CARBON	12K	5%	1/4W	F
⚠R208	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R209	1-249-411-11	CARBON	330	5%	1/4W	F
⚠R210	1-249-417-11	CARBON	1K	5%	1/4W	
		< TRANSFORMER >				
⚠T101	1-429-580-11	TRANSFORMER, CONVERTER				

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Ref. No.	Part No.	Description			Remark
*	A-7073-016-A	PS-347 (I) BOARD, COMPLETE (DSR-30P)			
		************************************			
*	A-7073-014-A	PS-394 (H) BOARD, COMPLETE (DSR-30)			
		************************************			
					(Ref No. 9,000 Series)
	1-533-183-11	HOLDER, FUSE			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
		< CAPACITOR >			
⚠C101	1-136-185-00	FILM	0.22uF	20%	250V (DSR-30P)
⚠C101	1-136-472-11	FILM	0.1uF	20%	250V (DSR-30)
⚠C102	1-113-930-11	CERAMIC	220PF	10%	125V (DSR-30P)
⚠C103	1-113-930-11	CERAMIC	220PF	10%	125V
⚠C104	1-136-472-11	FILM	0.1uF	20%	250V
⚠C105	1-113-930-11	CERAMIC	220PF	10%	125V
⚠C106	1-113-902-11	CERAMIC	680PF	20%	250V (DSR-30P)
⚠C106	1-113-915-11	CERAMIC	0.001uF	10%	125V (DSR-30)
C107	1-126-964-11	ELECT	10uF	20%	50V
C108	1-104-665-11	ELECT	100uF	20%	25V
⚠C109	1-115-586-11	ELECT	220uF	20%	400V (DSR-30P)
⚠C109	1-107-524-11	ELECT	470uF	20%	200V (DSR-30)
C110	1-126-964-11	ELECT	10uF	20%	50V
C111	1-126-964-11	ELECT	10uF	20%	50V
C112	1-104-665-11	ELECT	100uF	20%	25V
C113	1-104-665-11	ELECT	100uF	20%	25V
C114	1-104-665-11	ELECT	100uF	20%	25V
⚠C115	1-136-185-00	FILM	0.22uF	20%	250V (DSR-30P)
C116	1-126-160-11	ELECT	1uF	20%	50V
⚠C120	1-113-902-11	CERAMIC	680PF	20%	250V (DSR-30P)
⚠C120	1-113-915-11	CERAMIC	0.001uF	10%	125V (DSR-30)
⚠C124	1-113-894-11	CERAMIC	100PF	10%	250V (DSR-30P)
⚠C124	1-113-897-11	CERAMIC	100PF	10%	125V (DSR-30)
⚠C125	1-113-894-11	CERAMIC	100PF	10%	250V (DSR-30P)
⚠C125	1-113-897-11	CERAMIC	100PF	10%	125V (DSR-30)
⚠C126	1-113-930-11	CERAMIC	220PF	10%	125V (DSR-30)
⚠C127	1-113-930-11	CERAMIC	220PF	10%	125V (DSR-30)
		< CONNECTOR >			
* CN100	1-569-496-11	SOCKET, CONNECTOR 10P			
* CN102	1-569-494-11	SOCKET, CONNECTOR 8P			
CN103	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
		< COMPOSITION CIRCUIT BLOCK >			
⚠CP100	1-468-108-11	POWER BLOCK (SWR POPS2010)(DSR-30P)			
⚠CP100	1-468-087-12	POWER BLOCK (SWR SOPS-2009)(DSR-30)			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D100	8-719-801-48	DIODE 1SS193			
⚠D101	8-719-510-22	DIODE D3SB60			
		< FUSE >			
⚠F101	1-532-203-00	FUSE, TIME-LAG (T2AL 250V)(DSR-30P)			
⚠F101	1-532-743-11	FUSE, GLASS TUBE (2A 125V)(DSR-30)			
		< FERRITE BEAD >			
FB101	1-412-761-11	INDUCTOR, FERRITE BEAD			
FB102	1-412-761-11	INDUCTOR, FERRITE BEAD			
FB103	1-412-761-11	INDUCTOR, FERRITE BEAD			
FB104	1-412-761-11	INDUCTOR, FERRITE BEAD			
		< IC >			
IC100	8-759-701-84	IC NJM7905FA			
IC101	8-759-321-95	IC HA17431PA			
		< JUMPER RESISTOR >			
JR100	1-216-296-91	CONDUCTOR, CHIP (3216)			
JR101	1-216-296-91	CONDUCTOR, CHIP (3216)(DSR-30)			
JR102	1-216-296-91	CONDUCTOR, CHIP (3216)(DSR-30)			
JR103	1-216-296-91	CONDUCTOR, CHIP (3216)(DSR-30)			
JR104	1-216-296-91	CONDUCTOR, CHIP (3216)(DSR-30P)			
JR106	1-216-296-91	CONDUCTOR, CHIP (3216)			
JR107	1-216-295-91	CONDUCTOR, CHIP (2012)(DSR-30)			
		< COIL >			
L101	1-406-973-11	COIL, CHOKE 22uH			
L104	1-406-973-11	COIL, CHOKE 22uH			
L105	1-412-529-31	INDUCTOR	22uH		
L106	1-412-529-31	INDUCTOR	22uH		
		< LINE FILTER >			
⚠LF101	1-409-995-11	FILTER, LINE (DSR-30P)			
⚠LF101	1-411-734-11	FILTER, LINE (DSR-30)			
⚠LF102	1-409-995-11	FILTER, LINE			
⚠LF103	1-411-895-11	FILTER, LINE (DSR-30P)			
⚠LF103	1-409-995-11	FILTER, LINE (DSR-30)			
		< IC LINK >			
⚠PS100	1-532-984-11	LINK, IC (ICP-N50)(DSR-30P)			
		< TRANSISTOR >			
Q100	8-729-010-25	TRANSISTOR MSD601-RT1			
Q101	8-729-209-15	TRANSISTOR 2SD2012			
		< RESISTOR >			
R100	1-216-015-00	METAL CHIP	39	5%	1/10W
⚠R101	1-214-947-00	METAL	2.7M	1%	1/2W (DSR-30P)
R102	1-208-772-11	METAL GLAZE	390	0.50%	1/10W
R103	1-208-786-11	METAL GLAZE	1.5K	0.50%	1/10W
R106	1-216-295-91	CONDUCTOR, CHIP (2012)			

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Ref. No.	Part No.	Description				Remark
*	A-7073-017-A	PS-348 (I) BOARD, COMPLETE (DSR-30P)				
		*************************************				
*	A-7073-015-A	PS-395 (H) BOARD, COMPLETE (DSR-30)				
		*************************************				
						(Ref No. 9,000 Series)
		< CAPACITOR >				
C001	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C002	1-126-967-11	ELECT	47uF	20%	16V	
C003	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C004	1-164-336-11	CERAMIC CHIP	0.33uF		25V	
C005	1-126-964-11	ELECT	10uF	20%	50V	
C006	1-126-964-11	ELECT	10uF	20%	50V	
C008	1-126-964-11	ELECT	10uF	20%	50V	
C009	1-126-967-11	ELECT	47uF	20%	16V	
C010	1-126-967-11	ELECT	47uF	20%	16V	
C011	1-126-933-11	ELECT	100uF	20%	10V	
C013	1-126-962-11	ELECT	3.3uF	20%	50V	
C014	1-126-967-11	ELECT	47uF	20%	16V	
C016	1-126-962-11	ELECT	3.3uF	20%	50V	
C019	1-126-967-11	ELECT	47uF	20%	16V	
		< CONNECTOR >				
CN001	1-506-481-11	PIN, CONNECTOR 2P				
* CN002	1-564-013-11	PIN, CONNECTOR 3P				
* CN003	1-569-505-11	PIN, CONNECTOR 10P				
* CN004	1-569-503-11	PIN, CONNECTOR 8P				
* CN005	1-564-033-00	PIN, CONNECTOR 8P				
CN006	1-506-484-11	PIN, CONNECTOR 5P				
CN007	1-764-415-11	CONNECTOR, FFC/FPC 26P				
CN008	1-506-481-11	PIN, CONNECTOR 2P				
		< DIODE >				
D001	8-719-801-48	DIODE	1SS193			
D002	8-719-801-48	DIODE	1SS193			
D003	8-719-801-48	DIODE	1SS193			
D004	8-719-801-48	DIODE	1SS193			
D005	8-719-801-48	DIODE	1SS193			
D006	8-719-105-90	DIODE	RD5.6M-B1			
D007	8-719-105-57	DIODE	RD3.9M-B1			
		< FUSE >				
⚠F001	1-532-777-21	FUSE, MICRO (SECONDARY) (1.25A 125V)				(DSR-30)
⚠F002	1-532-782-11	FUSE, MICRO (SECONDARY) (4A 125V) (DSR-30)				
⚠F003	1-532-779-11	FUSE, MICRO (SECONDARY) (2A 125V) (DSR-30)				
⚠F004	1-532-779-11	FUSE, MICRO (SECONDARY) (2A 125V) (DSR-30)				
⚠F005	1-532-776-21	FUSE, MICRO (SECONDARY) (1A 125V) (DSR-30)				
		< IC >				
IC001	8-759-513-71	IC	PQ05RF21 (DSR-30P)			
IC001	8-759-069-28	IC	PQ05RF11 (DSR-30)			
IC002	8-759-973-95	IC	BA6219B			
IC003	8-759-098-24	IC	PQ30RV11			
IC004	8-759-098-24	IC	PQ30RV11			
IC005	8-759-069-28	IC	PQ05RF11			
IC006	8-759-513-72	IC	PQ12RF11			
IC007	8-759-701-59	IC	NJM78M09FA			
		< JUMPER RESISTOR >				
JR001	1-216-296-91	CONDUCTOR, CHIP (3216)				
JR002	1-216-296-91	CONDUCTOR, CHIP (3216)				
JR003	1-216-296-91	CONDUCTOR, CHIP (3216)				
JR004	1-216-296-91	CONDUCTOR, CHIP (3216)				
		< IC LINK >				
⚠PS001	1-532-840-21	LINK, IC (PRF-1250 1.25A)(DSR-30P)				
⚠PS002	1-532-637-00	LINK, IC (ICP-N25 1A)(DSR-30P)				
⚠PS004	1-532-845-21	LINK, IC (PRF-4000 4A)(DSR-30P)				
⚠PS005	1-532-984-11	LINK, IC (ICP-N50 2A)(DSR-30P)				
		< TRANSISTOR >				
Q001	8-729-027-38	TRANSISTOR	DTA144EKA-T146			
Q002	8-729-140-98	TRANSISTOR	2SD773-34			
Q772	8-729-037-72	TRANSISTOR	UN9211J-(TX).SO (DSR-30)			
Q775	8-729-037-72	TRANSISTOR	UN9211J-(TX).SO (DSR-30)			
		< RESISTOR >				
⚠R001	1-212-976-11	FUSIBLE	56	5%	1/2W	F
⚠R003	1-212-968-00	FUSIBLE	27	5%	1/2W	F
⚠R004	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R006	1-216-039-00	METAL CHIP	390	5%	1/10W	
R007	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R008	1-216-039-00	METAL CHIP	390	5%	1/10W	
R009	1-208-776-11	METAL GLAZE	560	0.50%	1/10W	
R010	1-208-771-11	METAL GLAZE	360	0.50%	1/10W	
R011	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R012	1-216-037-00	METAL CHIP	330	5%	1/10W	
R014	1-216-013-00	METAL CHIP	33	5%	1/10W	
R015	1-216-013-00	METAL CHIP	33	5%	1/10W	
R016	1-216-013-00	METAL CHIP	33	5%	1/10W	
R017	1-216-013-00	METAL CHIP	33	5%	1/10W	

Ref. No.	Part No.	Description				Remark
*	A-7066-708-A	RP-193 BOARD, COMPLETE				
		***********************				
						(Ref No. 1,000 Series)
	1-776-149-11	CABLE, FLEXIBLE FLAT (DSR-30P)				
	1-776-150-11	CABLE, FLEXIBLE FLAT (DSR-30P)				
		< CAPACITOR >				
C701	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V	
C702	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V	
C703	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V	
C704	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V	
C705	1-164-173-11	CERAMIC CHIP	0.0039uF	10%	50V	
C706	1-164-173-11	CERAMIC CHIP	0.0039uF	10%	50V	
C770	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	
C771	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C772	1-164-360-11	CERAMIC CHIP	0.1uF		16V	
C774	1-164-360-11	CERAMIC CHIP	0.1uF		16V	
C775	1-164-360-11	CERAMIC CHIP	0.1uF		16V	
C776	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C777	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C778	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C779	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C780	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C781	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C782	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C783	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	
C784	1-162-974-11	CERAMIC CHIP	0.01uF		50V	

Ref. No.	Part No.	Description			Remark
C785	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C786	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C787	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C788	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C789	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C791	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C792	1-128-004-11	ELECT CHIP	10uF	20%	16V
C793	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C794	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C795	1-128-004-11	ELECT CHIP	10uF	20%	16V
C796	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C797	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C798	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C799	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C800	1-216-864-11	METAL CHIP	0	5%	1/16W
C801	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C802	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C803	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C804	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C806	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C807	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C809	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C810	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C811	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C812	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C813	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C814	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C815	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C816	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C817	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C818	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C819	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C821	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C822	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C823	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C824	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C825	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C826	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C827	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C828	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C829	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C830	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C831	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C832	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C833	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C834	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C835	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C836	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C837	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C838	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V
C839	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V
C841	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C842	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C843	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C844	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C845	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C847	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C848	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C849	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C850	1-162-974-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description			Remark
C851	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C852	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C853	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C854	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C855	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C857	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C859	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C861	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C862	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C873	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C874	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C875	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C876	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
		< CONNECTOR >			
CN101	1-750-345-11	CONNECTOR, FFC/EPC (ZIF)(DSR-30P)			
CN102	1-750-345-11	CONNECTOR, FFC/EPC (ZIF)(DSR-30P)			
CN103	1-750-345-11	CONNECTOR, FFC/EPC (ZIF)(DSR-30P)			
CN104	1-573-990-21	CONNECTOR, BOARD TO BOARD 10P			
CN771	1-770-305-11	CONNECTOR, FFC/FPC 10P			
CN775	1-573-371-21	CONNECTOR, BOARD TO BOARD 14P			
		< DIODE >			
D771	8-719-056-23	DIODE MA2S111-(K8).SO			
D772	8-719-056-23	DIODE MA2S111-(K8).SO			
D773	8-719-041-39	DIODE KV1470			
D774	8-719-052-27	DIODE 1SS351-TB			
D775	8-719-052-27	DIODE 1SS351-TB			
D776	8-719-027-95	DIODE HSM88WK			
		< FLUORESCENT INDICATOR >			
FL770	1-411-274-21	LINE, LC DELAY (23NS)			
FL771	1-233-343-21	FILTER, LOW PASS			
FL772	1-233-344-21	FILTER, LOW PASS			
		< IC >			
IC770	8-759-278-56	IC AK6440HF-E2			
IC771	8-759-064-36	IC MB88346BPFV			
IC772	8-752-371-18	IC CXD2302Q			
IC773	8-752-070-12	IC CXA1762Q			
IC774	8-752-380-06	IC CXD2189AR-T6			
IC775	8-752-070-11	IC CXA1761R			
IC777	8-752-067-87	IC CXA1760Q			
		< COIL >			
L770	1-414-398-11	INDUCTOR	10uH		
L772	1-414-398-11	INDUCTOR	10uH		
L773	1-414-398-11	INDUCTOR	10uH		
L774	1-414-398-11	INDUCTOR	10uH		
L776	1-414-398-11	INDUCTOR	10uH		
L777	1-414-398-11	INDUCTOR	10uH		
L778	1-414-398-11	INDUCTOR	10uH		
L779	1-410-738-41	INDUCTOR CHIP	0.56uH		
L780	1-414-398-11	INDUCTOR	10uH		
L781	1-412-963-11	INDUCTOR	100uH		
L782	1-412-963-11	INDUCTOR	100uH		
L783	1-414-398-11	INDUCTOR	10uH		
L789	1-414-398-11	INDUCTOR	10uH		
L791	1-414-398-11	INDUCTOR	10uH		

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q701	8-729-013-04	TRANSISTOR	2SC4851		
Q702	8-729-013-04	TRANSISTOR	2SC4851		
Q772	8-729-037-72	TRANSISTOR	UN9211J-(TX).SO		
Q773	8-729-141-48	TRANSISTOR	2SB624-BV345		
Q774	8-729-141-48	TRANSISTOR	2SB624-BV345		
Q775	8-729-037-72	TRANSISTOR	UN9211J-(TX).SO		
Q776	8-729-425-64	TRANSISTOR	2SD2216-Q		
Q777	8-729-425-64	TRANSISTOR	2SD2216-Q		
Q778	8-729-425-64	TRANSISTOR	2SD2216-Q		
Q779	8-729-425-64	TRANSISTOR	2SD2216-Q		
Q784	8-729-425-50	TRANSISTOR	2SB1462-Q		
		< RESISTOR >			
R701	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R702	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R703	1-216-809-11	METAL CHIP	100	5%	1/16W
R704	1-216-810-11	METAL CHIP	120	5%	1/16W
R705	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R706	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R707	1-216-809-11	METAL CHIP	100	5%	1/16W
R708	1-216-810-11	METAL CHIP	120	5%	1/16W
R770	1-216-845-11	METAL CHIP	100K	5%	1/16W
R774	1-216-841-11	METAL CHIP	47K	5%	1/16W
R776	1-216-818-11	METAL CHIP	560	5%	1/16W
R779	1-216-847-11	METAL CHIP	150K	5%	1/16W
R780	1-216-837-11	METAL CHIP	22K	5%	1/16W
R781	1-216-821-11	METAL CHIP	1K	5%	1/16W
R782	1-216-833-11	METAL CHIP	10K	5%	1/16W
R783	1-216-833-11	METAL CHIP	10K	5%	1/16W
R784	1-216-833-11	METAL CHIP	10K	5%	1/16W
R785	1-216-833-11	METAL CHIP	10K	5%	1/16W
R786	1-216-817-11	METAL CHIP	470	5%	1/16W
R787	1-202-924-11	METAL GLAZE	240	5%	1/16W
R788	1-202-924-11	METAL GLAZE	240	5%	1/16W
R789	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R790	1-216-841-11	METAL CHIP	47K	5%	1/16W
R791	1-216-815-11	METAL CHIP	330	5%	1/16W
R792	1-216-817-11	METAL CHIP	470	5%	1/16W
R793	1-216-815-11	METAL CHIP	330	5%	1/16W
R794	1-216-816-11	METAL CHIP	390	5%	1/16W
R795	1-216-815-11	METAL CHIP	330	5%	1/16W
R796	1-216-801-11	METAL CHIP	22	5%	1/16W
R797	1-216-815-11	METAL CHIP	330	5%	1/16W
R798	1-216-815-11	METAL CHIP	330	5%	1/16W
R799	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R800	1-216-841-11	METAL CHIP	47K	5%	1/16W
R801	1-216-841-11	METAL CHIP	47K	5%	1/16W
R802	1-216-841-11	METAL CHIP	47K	5%	1/16W
R803	1-216-864-11	METAL CHIP	0	5%	1/16W
R804	1-216-834-11	METAL CHIP	12K	5%	1/16W
R805	1-216-834-11	METAL CHIP	12K	5%	1/16W
R806	1-216-821-11	METAL CHIP	1K	5%	1/16W
R808	1-216-821-11	METAL CHIP	1K	5%	1/16W
R810	1-216-834-11	METAL CHIP	12K	5%	1/16W
R811	1-216-834-11	METAL CHIP	12K	5%	1/16W
R812	1-216-834-11	METAL CHIP	12K	5%	1/16W
R813	1-216-834-11	METAL CHIP	12K	5%	1/16W
R814	1-216-853-11	METAL CHIP	470K	5%	1/16W
R815	1-216-853-11	METAL CHIP	470K	5%	1/16W
R816	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R817	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R818	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R819	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R820	1-216-803-11	METAL CHIP	33	5%	1/16W
R821	1-216-833-11	METAL CHIP	10K	5%	1/16W
R822	1-216-834-11	METAL CHIP	12K	5%	1/16W
R823	1-216-834-11	METAL CHIP	12K	5%	1/16W
R824	1-216-821-11	METAL CHIP	1K	5%	1/16W
R825	1-216-835-11	METAL CHIP	15K	5%	1/16W
R826	1-216-833-11	METAL CHIP	10K	5%	1/16W
R827	1-216-821-11	METAL CHIP	1K	5%	1/16W
R828	1-216-835-11	METAL CHIP	15K	5%	1/16W
R829	1-216-835-11	METAL CHIP	15K	5%	1/16W
R830	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R831	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R832	1-216-807-11	METAL CHIP	68	5%	1/16W
R843	1-216-819-11	METAL CHIP	680	5%	1/16W
R844	1-216-819-11	METAL CHIP	680	5%	1/16W
R849	1-216-816-11	METAL CHIP	390	5%	1/16W
R850	1-216-815-11	METAL CHIP	330	5%	1/16W
R851	1-216-815-11	METAL CHIP	330	5%	1/16W
R852	1-216-816-11	METAL CHIP	390	5%	1/16W
R855	1-216-834-11	METAL CHIP	12K	5%	1/16W
R856	1-216-834-11	METAL CHIP	12K	5%	1/16W
R858	1-216-816-11	METAL CHIP	390	5%	1/16W
R860	1-216-864-11	METAL CHIP	0	5%	1/16W
R861	1-216-864-11	METAL CHIP	0	5%	1/16W
R862	1-216-864-11	METAL CHIP	0	5%	1/16W

* A-7072-610-A SW-274 (C) BOARD, COMPLETE

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(Ref No. 9,000 Series)

Ref. No.	Part No.	Description
		< CONNECTOR >
* CN601	1-580-056-21	PIN, CONNECTOR 3P
		< SWITCH >
S601	1-572-288-11	SWITCH, PUSH (CLOSE)
S602	1-572-688-11	SWITCH, PUSH (1 KEY)(OPEN)

* A-7066-922-A TB-30 (G) BOARD, COMPLETE

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(Ref No. 7,000 Series)

Ref. No.	Part No.	Description			
	1-776-161-11	CABLE, FLAT (FFH-18) 25P			
		< CAPACITOR >			
C206	1-126-964-11	ELECT	10uF	20%	50V
C207	1-126-967-11	ELECT	47uF	20%	50V
C209	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C212	1-126-964-11	ELECT	10uF	20%	50V
C245	1-126-960-11	ELECT	1uF	20%	50V
		< CONNECTOR >			
CN100	1-770-166-11	CONNECTOR, FFC/FPC 17P			
CN200	1-770-653-11	CONNECTOR, FFC/FPC 25P			

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D203	8-719-157-42	DIODE RD8.2M-B	
		< DC/DC CONVERTER >	
DC200	1-473-301-11	CONVERTER UNIT, DC/DC	
		< COIL >	
L207	1-410-671-31	INDUCTOR 47uH	
L208	1-414-177-11	INDUCTOR 1uH	
L209	1-414-177-11	INDUCTOR 1uH	

Ref. No.	Part No.	Description	Remark
*	A-7072-628-A	TK-37 (C) BOARD, COMPLETE (DSR-30P) *************************************	
*	A-7072-981-A	TK-42 BOARD, COMPLETE (DSR-30) *******************************	
			(Ref No. 5,000 Series)
		< CAPACITOR >	
C201	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C202	1-124-589-11	ELECT 47uF 20%	16V
C203	1-164-336-11	CERAMIC CHIP 0.33uF	25V
C204	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C210	1-163-038-91	CERAMIC CHIP 0.1uF	25V
		< CONNECTOR >	
CN201	1-563-141-11	CONNECTOR, F.P.C 8P	
CN202	1-774-757-11	CONNECTOR, FFC/FPC 15P	
CN203	1-506-481-11	PIN, CONNECTOR 2P	
		< DIODE >	
D201	8-719-106-16	DIODE RD6.8M-B1	
		< IC >	
IC201	8-759-973-95	IC BA6219B	
		< JUMPER RESISTOR >	
JR200	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR201	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR202	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR203	1-216-295-91	CONDUCTOR, CHIP (2012)	
JR204	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR205	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR206	1-216-295-91	CONDUCTOR, CHIP (2012)	
JR207	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR208	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR209	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR210	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR211	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR212	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR213	1-216-295-91	CONDUCTOR, CHIP (2012)	
JR214	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR215	1-216-295-91	CONDUCTOR, CHIP (2012)	
JR217	1-216-295-91	CONDUCTOR, CHIP (2012)	
JR218	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR219	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR220	1-216-296-91	CONDUCTOR, CHIP (3216)	
		< RESISTOR >	
R202	1-216-013-00	METAL CHIP 33 5%	1/10W
R203	1-216-013-00	METAL CHIP 33 5%	1/10W
R204	1-216-013-00	METAL CHIP 33 5%	1/10W
R205	1-216-013-00	METAL CHIP 33 5%	1/10W
		< SWITCH >	
S201	1-571-300-21	SWITCH, ROTARY (TRAY(OPEN/CLOSE))	

Ref. No.	Part No.	Description	Remark
*	A-7066-952-A	VA-99 (H) BOARD, COMPLETE (DSR-30) ************************************	
*	A-7066-956-A	VA-99 (I) BOARD, COMPLETE (DSR-30P) *************************************	
			(Ref No. 3,000 Series)
	1-776-152-11	CABLE, FLAT (FVJ-1) 25P	
	1-776-153-11	CABLE, FLAT (FVJ-4) 25P	
	1-776-154-11	CABLE, FLAT (FVP-1) 26P	
	1-776-155-11	CABLE, FLAT (FVT-2B) 17P	
	1-776-158-11	CABLE, FLAT (FVF-4M)(DSR-30P)	
		< CAPACITOR >	
C001	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C002	1-124-778-00	ELECT CHIP 22uF 20%	6.3V
C003	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C004	1-124-778-00	ELECT CHIP 22uF 20%	6.3V
C007	1-128-004-11	ELECT CHIP 10uF 20%	16V
C008	1-124-778-00	ELECT CHIP 22uF 20%	6.3V
C009	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C010	1-128-004-11	ELECT CHIP 10uF 20%	16V (DSR-30P)
C011	1-128-003-11	ELECT CHIP 22uF 20%	4V
C012	1-128-003-11	ELECT CHIP 22uF 20%	4V
C013	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C014	1-128-003-11	ELECT CHIP 22uF 20%	4V
C015	1-128-003-11	ELECT CHIP 22uF 20%	4V
C016	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C022	1-128-006-11	ELECT CHIP 4.7uF 20%	25V
C027	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C028	1-162-967-11	CERAMIC CHIP 0.0033uF 10%	50V
C029	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C030	1-164-361-11	CERAMIC CHIP 0.047uF	16V
C031	1-128-007-11	ELECT CHIP 2.2uF 20%	35V
C032	1-128-006-11	ELECT CHIP 4.7uF 20%	25V
C033	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C041	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C043	1-128-004-11	ELECT CHIP 10uF 20%	16V
C044	1-124-778-00	ELECT CHIP 22uF 20%	6.3V
C045	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C046	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C054	1-128-003-11	ELECT CHIP 22uF 20%	4V
C057	1-128-003-11	ELECT CHIP 22uF 20%	4V
C059	1-124-778-00	ELECT CHIP 22uF 20%	6.3V
C060	1-124-778-00	ELECT CHIP 22uF 20%	6.3V
C061	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C062	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C063	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C064	1-162-974-11	CERAMIC CHIP 0.01uF	50V

Ref. No.	Part No.	Description			Remark
C068	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C069	1-162-974-11	CERAMIC CHIP	0.01uF		50V (DSR-30P)
C070	1-162-974-11	CERAMIC CHIP	0.01uF		50V (DSR-30P)
C073	1-128-003-11	ELECT CHIP	22uF	20%	4V
C074	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C075	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C076	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C077	1-128-008-11	ELECT CHIP	3.3uF	20%	35V (DSR-30)
C077	1-128-012-11	ELECT CHIP	0.47uF	20%	50V (DSR-30P)
C078	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C079	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C080	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C081	1-128-006-11	ELECT CHIP	4.7uF	20%	25V (DSR-30P)
C081	1-128-013-11	ELECT CHIP	1uF	20%	50V (DSR-30)
C082	1-162-919-11	CERAMIC CHIP	22PF	5%	50V (DSR-30P)
C082	1-162-923-11	CERAMIC CHIP	47PF	5%	50V (DSR-30)
C083	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C084	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C085	1-128-013-11	ELECT CHIP	1uF	20%	50V
C087	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C088	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C089	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C090	1-128-013-11	ELECT CHIP	1uF	20%	50V
C091	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C092	1-162-919-11	CERAMIC CHIP	22PF	5%	50V (DSR-30)
C092	1-164-237-11	CERAMIC CHIP	16PF	5%	50V (DSR-30P)
C093	1-128-003-11	ELECT CHIP	22uF	20%	4V
C094	1-128-003-11	ELECT CHIP	22uF	20%	4V
C095	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C096	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C097	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C098	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C099	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C151	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C152	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C153	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C154	1-128-013-11	ELECT CHIP	1uF	20%	50V
C155	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C156	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C157	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C158	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C159	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C160	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C161	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C162	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C163	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C164	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C165	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C166	1-128-013-11	ELECT CHIP	1uF	20%	50V
C167	1-128-013-11	ELECT CHIP	1uF	20%	50V
C168	1-162-974-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description			Remark
C169	1-128-013-11	ELECT CHIP	1uF	20%	50V
C170	1-128-013-11	ELECT CHIP	1uF	20%	50V
C171	1-128-013-11	ELECT CHIP	1uF	20%	50V
C172	1-128-003-11	ELECT CHIP	22uF	20%	4V
C173	1-128-003-11	ELECT CHIP	22uF	20%	4V
C174	1-128-003-11	ELECT CHIP	22uF	20%	4V
C175	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C176	1-128-013-11	ELECT CHIP	1uF	20%	50V
C177	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C178	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C179	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C180	1-164-218-11	CERAMIC CHIP	180PF	0.25PF	50V
C202	1-128-007-11	ELECT CHIP	2.2uF	20%	35V
C203	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C206	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C207	1-128-004-11	ELECT CHIP	10uF	20%	16V
C208	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C210	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C211	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C212	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C213	1-128-004-11	ELECT CHIP	10uF	20%	16V
C214	1-162-916-11	CERAMIC CHIP	12PF	5%	50V (DSR-30)
C214	1-162-917-11	CERAMIC CHIP	15PF	5%	50V (DSR-30P)
C215	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C217	1-162-906-11	CERAMIC CHIP	1.5PF	0.25PF	50V (DSR-30)
C231	1-128-003-11	ELECT CHIP	22uF	20%	4V
C232	1-128-003-11	ELECT CHIP	22uF	20%	4V
C233	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C235	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C236	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C237	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C238	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C239	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C240	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C241	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C242	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C243	1-128-003-11	ELECT CHIP	22uF	20%	4V
C244	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C245	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C251	1-128-003-11	ELECT CHIP	22uF	20%	4V
C252	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C253	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C254	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C255	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C256	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C261	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C262	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C263	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C264	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C265	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C266	1-128-003-11	ELECT CHIP	22uF	20%	4V
C267	1-128-003-11	ELECT CHIP	22uF	20%	4V
C268	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C269	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C270	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C271	1-126-205-11	ELECT CHIP	47uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C272	1-162-916-11	CERAMIC CHIP	12PF	5%	50V (DSR-30P)
C272	1-164-237-11	CERAMIC CHIP	16PF	5%	50V (DSR-30)
C273	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C274	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C275	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C276	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C281	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C282	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C283	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C284	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C285	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C286	1-128-013-11	ELECT CHIP	1uF	20%	50V
C287	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C288	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C289	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C304	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C305	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C306	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C307	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C308	1-128-004-11	ELECT CHIP	10uF	20%	16V
C309	1-128-003-11	ELECT CHIP	22uF	20%	4V
C310	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C311	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V (DSR-30)
C311	1-164-360-11	CERAMIC CHIP	0.1uF		16V (DSR-30P)
C312	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C313	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C314	1-128-003-11	ELECT CHIP	22uF	20%	4V
C315	1-128-004-11	ELECT CHIP	10uF	20%	16V
C316	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C318	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V (DSR-30)
C318	1-164-360-11	CERAMIC CHIP	0.1uF		16V (DSR-30P)
C335	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C336	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C337	1-128-009-11	ELECT CHIP	0.1uF	20%	50V
C338	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C339	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C340	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C341	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C342	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C343	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C344	1-128-004-11	ELECT CHIP	10uF	20%	16V
C345	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C351	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C352	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C353	1-128-004-11	ELECT CHIP	10uF	20%	16V
C354	1-128-013-11	ELECT CHIP	1uF	20%	50V
C355	1-128-004-11	ELECT CHIP	10uF	20%	16V
C356	1-128-004-11	ELECT CHIP	10uF	20%	16V
C358	1-162-920-11	CERAMIC CHIP	27PF	5%	50V (DSR-30)
C358	1-162-921-11	CERAMIC CHIP	33PF	5%	50V (DSR-30P)
C359	1-162-917-11	CERAMIC CHIP	15PF	5%	50V (DSR-30)
C367	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remark
C368	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C369	1-128-004-11	ELECT CHIP	10uF	20%	16V
C370	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C401	1-124-779-00	ELECT CHIP	10uF	20%	16V
C402	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C403	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C404	1-124-779-00	ELECT CHIP	10uF	20%	16V
C405	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C410	1-113-503-11	CERAMIC CHIP	0.0039uF	5%	25V
C411	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C415	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C417	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C418	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C422	1-126-607-11	ELECT CHIP	47uF	20%	4V
C423	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C424	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C425	1-126-607-11	ELECT CHIP	47uF	20%	4V
C426	1-124-779-00	ELECT CHIP	10uF	20%	16V
C428	1-128-003-11	ELECT CHIP	22uF	20%	4V
C429	1-128-003-11	ELECT CHIP	22uF	20%	4V
C430	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C432	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C456	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C504	1-124-779-00	ELECT CHIP	10uF	20%	16V
C505	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C510	1-113-503-11	CERAMIC CHIP	0.0039uF	5%	25V
C511	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C515	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C517	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C518	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C522	1-126-607-11	ELECT CHIP	47uF	20%	4V
C523	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C524	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C525	1-126-607-11	ELECT CHIP	47uF	20%	4V
C526	1-124-779-00	ELECT CHIP	10uF	20%	16V
C528	1-128-003-11	ELECT CHIP	22uF	20%	4V
C529	1-128-003-11	ELECT CHIP	22uF	20%	4V
C530	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C532	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C600	1-128-004-11	ELECT CHIP	10uF	20%	16V
C601	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C602	1-128-004-11	ELECT CHIP	10uF	20%	16V (DSR-30)
C602	1-128-006-11	ELECT CHIP	4.7uF	20%	25V (DSR-30P)
C603	1-124-779-00	ELECT CHIP	10uF	20%	16V
C606	1-124-779-00	ELECT CHIP	10uF	20%	16V
C610	1-124-779-00	ELECT CHIP	10uF	20%	16V
C611	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C612	1-124-779-00	ELECT CHIP	10uF	20%	16V
C613	1-124-779-00	ELECT CHIP	10uF	20%	16V
C614	1-124-779-00	ELECT CHIP	10uF	20%	16V
C615	1-124-779-00	ELECT CHIP	10uF	20%	16V
C616	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C617	1-124-779-00	ELECT CHIP	10uF	20%	16V
C621	1-124-779-00	ELECT CHIP	10uF	20%	16V
C622	1-124-779-00	ELECT CHIP	10uF	20%	16V
C623	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C624	1-124-779-00	ELECT CHIP	10uF	20%	16V
C625	1-124-779-00	ELECT CHIP	10uF	20%	16V

Ref. No.	Part No.	Description			Remark
C626	1-124-779-00	ELECT CHIP	10uF	20%	16V
C627	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C628	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C630	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C631	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C633	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C634	1-128-392-11	ELECT	470uF	20%	6.3V
C637	1-109-994-11	CERAMIC CHIP	2.2uF	10%	10V
C701	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C704	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C706	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C707	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C709	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C710	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C711	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C712	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C713	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C714	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C716	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C717	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C718	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C721	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C722	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C723	1-128-004-11	ELECT CHIP	10uF	20%	16V
C724	1-128-004-11	ELECT CHIP	10uF	20%	16V
C732	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C740	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C741	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C742	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C770	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C771	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C772	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C801	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C802	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C850	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C851	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C862	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C863	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C864	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C865	1-125-507-11	CAPACITOR	0.22F		5.5V
C871	1-128-004-11	ELECT CHIP	10uF	20%	16V
C872	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C873	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C874	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C875	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C876	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C913	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C914	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C915	1-162-923-11	CERAMIC CHIP	47PF	5%	50V (DSR-30P)
C915	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (DSR-30)
C916	1-162-923-11	CERAMIC CHIP	47PF	5%	50V (DSR-30P)
C916	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (DSR-30)
C917	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C918	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C919	1-162-923-11	CERAMIC CHIP	47PF	5%	50V

Ref. No.	Part No.	Description			Remark
C920	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C921	1-162-923-11	CERAMIC CHIP	47PF	5%	50V (DSR-30P)
C921	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (DSR-30)
C922	1-162-923-11	CERAMIC CHIP	47PF	5%	50V (DSR-30P)
C922	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (DSR-30)
C923	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C924	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C925	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C926	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C936	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C937	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C938	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C939	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C940	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C941	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C945	1-164-360-11	CERAMIC CHIP	0.1uF		16V

< FILTER >

Ref. No.	Part No.	Description
CF801	1-579-125-11	VIBRATOR, CERAMIC

< CONNECTOR >

Ref. No.	Part No.	Description
CN002	1-774-769-11	CONNECTOR, FFC/FPC 25P
CN003	1-565-212-11	CONNECTOR, FPC (ZIF) 26P
CN601	1-774-769-11	CONNECTOR, FFC/FPC 25P
CN604	1-774-766-11	CONNECTOR, FFC/FPC 11P
CN701	1-774-770-11	CONNECTOR, FFC/FPC (DSR-30P)
CN702	1-774-767-11	CONNECTOR, FFC/FPC 15P
CN870	1-774-765-11	CONNECTOR, FFC/FPC 8P
CN901	1-691-058-11	HOUSING, CONNECTOR 26P
CN903	1-774-769-11	CONNECTOR, FFC/FPC 25P
CN904	1-774-768-11	CONNECTOR, FFC/FPC 17P
CN905	1-774-768-11	CONNECTOR, FFC/FPC 17P

< TRIMMER >

Ref. No.	Part No.	Description
CT001	1-141-424-11	CAP, ADJ

< DIODE >

Ref. No.	Part No.	Description	
D002	8-713-101-85	DIODE	1T363-01-T8A
D601	8-719-404-49	DIODE	MA111
D603	8-719-404-49	DIODE	MA111
D604	8-719-404-49	DIODE	MA111
D610	8-719-059-18	DIODE	RD6.2FM-T1
D700	8-719-404-49	DIODE	MA111
D701	8-719-200-82	DIODE	11ES2
D720	8-719-421-59	DIODE	MA3130WA-TX
D770	8-719-422-64	DIODE	MA8062-M
D771	8-719-404-49	DIODE	MA111
D861	8-719-801-78	DIODE	1SS184
D901	8-719-421-59	DIODE	MA3130WA-TX
D902	8-719-106-23	DIODE	RD7.5M-B2
D903	8-719-106-23	DIODE	RD7.5M-B2
D904	8-719-421-59	DIODE	MA3130WA-TX
D905	8-719-421-59	DIODE	MA3130WA-TX
D906	8-719-421-59	DIODE	MA3130WA-TX
D907	8-719-421-59	DIODE	MA3130WA-TX

Ref. No.	Part No.	Description	Remark
D908	8-719-421-59	DIODE MA3130WA-TX	
D909	8-719-421-59	DIODE MA3130WA-TX	
D911	8-719-421-59	DIODE MA3130WA-TX	
D912	8-719-421-59	DIODE MA3130WA-TX	
D913	8-719-421-59	DIODE MA3130WA-TX	
D914	8-719-421-59	DIODE MA3130WA-TX	
D915	8-719-421-59	DIODE MA3130WA-TX	
D916	8-719-421-59	DIODE MA3130WA-TX	
D917	8-719-421-59	DIODE MA3130WA-TX	
D918	8-719-421-59	DIODE MA3130WA-TX	
D919	8-719-421-59	DIODE MA3130WA-TX	
D920	8-719-106-43	DIODE RD9.1M-B1	
D921	8-719-106-43	DIODE RD9.1M-B1	
D922	8-719-421-59	DIODE MA3130WA-TX	
D923	8-719-801-78	DIODE 1SS184	
D924	8-719-421-59	DIODE MA3130WA-TX	
D925	8-719-801-78	DIODE 1SS184	
D926	8-719-106-43	DIODE RD9.1M-B1	
D930	8-719-421-59	DIODE MA3130WA-TX	
D932	8-719-106-23	DIODE RD7.5M-B2	
D933	8-719-106-23	DIODE RD7.5M-B2	
		< FLUORESCENT INDICATOR >	
FL001	1-233-500-11	FILTER, LOW PASS	
FL002	1-411-661-11	LINE, LC DELAY	
FL003	1-233-501-11	FILTER, LOW PASS	
FL004	1-233-501-11	FILTER, LOW PASS	
FL007	1-233-502-11	FILTER, BAND PASS (DSR-30)	
FL007	1-233-591-11	FILTER, BAND PASS (DSR-30P)	
		< IC >	
IC001	8-752-052-58	IC CXA1410M	
IC003	8-759-420-62	IC AN3916	
IC006	8-752-070-65	IC CXA1950Q	
IC007	8-759-069-28	IC PQ05RF11	
IC011	8-752-056-59	IC CXA1592R	
IC012	8-752-374-89	IC CXD2192Q	
IC013	8-759-084-76	IC MM1111XF	
IC014	8-759-287-89	IC MM1113XFF	
IC015	8-759-368-82	IC MB90089PFG155-BND-ER	
IC016	8-759-164-09	IC LA7218M	
IC017	8-759-182-16	IC MM1196XFBE	
IC018	8-759-349-01	IC MC68HC68VBIFB	
IC019	8-752-869-13	IC CXP81120-020R	
IC021	8-759-064-36	IC MB88346BPFV	
IC401	8-759-300-71	IC HD14053BFP	
IC407	8-759-745-64	IC NJM4560M	
IC501	8-759-300-71	IC HD14053BFP	
IC507	8-759-745-64	IC NJM4560M	
IC602	8-759-745-64	IC NJM4560M	
IC603	8-759-745-64	IC NJM4560M	
IC607	8-759-357-72	IC NJU3712M(TE2)	
IC609	8-759-359-51	IC NJM431M(TE2)	
IC610	8-759-357-68	IC NJM2115M-TE2	
IC611	8-759-929-26	IC TL431CPS	
IC612	8-759-359-51	IC NJM431M(TE2)	
IC613	8-759-745-64	IC NJM4560M	
IC615	8-759-745-64	IC NJM4560M	
IC616	8-759-745-64	IC NJM4560M	

Ref. No.	Part No.	Description	Remark
IC618	8-759-300-71	IC HD14053BFP	
IC619	8-759-300-71	IC HD14053BFP	
IC623	8-759-300-71	IC HD14053BFP	
IC624	8-759-357-73	IC TL32088CNS-E20	
IC625	8-759-370-20	IC DS1801	
IC626	8-759-745-64	IC NJM4560M	
IC627	8-759-357-67	IC TK15125MTL	
IC701	8-759-356-27	IC NJM2129M-TE2	
IC702	8-759-449-67	IC MB89099PF-G-112-BND (DSR-30)	
IC702	8-759-449-71	IC MB89P099PF-G-AKA-BND (DSR-30P)	
IC703	8-759-278-57	IC AK6420HF-E2	
IC770	8-759-999-02	IC TL1596CDB	
IC775	8-759-174-16	IC TC74VHC244F	
IC776	8-759-174-16	IC TC74VHC244F	
IC777	8-759-272-05	IC TC74VHCT244F	
IC778	8-759-011-65	IC MC74HC4053AF	
IC779	8-759-232-46	IC TC74HC126AF	
IC780	8-759-232-44	IC TC74HC125AF	
IC781	8-759-239-92	IC TC74HC07AF	
IC782	8-759-235-19	IC TC74HC08AF (EL)	
IC801	8-759-432-40	IC HD6433837TA87X (DSR-30P)	
IC801	8-759-449-51	IC HD6433837T (DSR-30)	
IC871	8-759-327-65	IC CXD8525N-E2	
		< JACK >	
J901	1-694-240-11	TERMINAL BOARD (LINE 1 IN/OUT, LINE 2 OUT)	
J903	1-573-798-11	JACK, MINIATURE (DIA. 3.5)(CONTROL S IN)	
J904	1-691-258-11	JACK (LANC)	
J905	1-573-798-11	JACK, MINIATURE (DIA. 3.5)(CONTROL S OUT)	
* J906	1-774-965-11	CONNECTOR, BNC (RECEPTACLE) (LINE 1 VIDEO IN/OUT, LINE 2 VIDEO OUT)	
J907	1-565-406-61	JACK, PIN 1P (OPEN PGM PLAY TRIGGER)	
		< JUMPER RESISTOR >	
JR801	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR802	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR803	1-216-296-91	CONDUCTOR, CHIP (3216)	
JR804	1-216-296-91	CONDUCTOR, CHIP (3216)	
		< COIL >	
L001	1-414-398-11	INDUCTOR 10uH	
L002	1-414-398-11	INDUCTOR 10uH	
L003	1-414-398-11	INDUCTOR 10uH	
L004	1-414-398-11	INDUCTOR 10uH	
L006	1-414-398-11	INDUCTOR 10uH	
L007	1-414-398-11	INDUCTOR 10uH	
L008	1-414-398-11	INDUCTOR 10uH	
L011	1-414-398-11	INDUCTOR 10uH	
L012	1-414-398-11	INDUCTOR 10uH	
L013	1-414-398-11	INDUCTOR 10uH	
L015	1-414-398-11	INDUCTOR 10uH	
L016	1-414-400-11	INDUCTOR 22uH	
L017	1-410-385-11	INDUCTOR CHIP 22uH	
L018	1-414-398-11	INDUCTOR 10uH	
L019	1-414-398-11	INDUCTOR 10uH	
L020	1-414-398-11	INDUCTOR 10uH	
L021	1-414-398-11	INDUCTOR 10uH	
L022	1-414-398-11	INDUCTOR 10uH	
L023	1-414-398-11	INDUCTOR 10uH	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
L024	1-414-398-11	INDUCTOR 10uH	
L025	1-410-388-31	INDUCTOR CHIP 39uH (DSR-30P)	
L025	1-410-389-31	INDUCTOR CHIP 47uH (DSR-30)	
L026	1-414-407-11	INDUCTOR 330uH	
L601	1-414-398-11	INDUCTOR 10uH	
L701	1-414-398-11	INDUCTOR 10uH	
L860	1-414-398-11	INDUCTOR 10uH	
L870	1-414-398-11	INDUCTOR 10uH	
L871	1-414-398-11	INDUCTOR 10uH	
L907	1-500-241-21	BEAD, FERRITE (CHIP)	
L908	1-500-241-21	BEAD, FERRITE (CHIP)	
L909	1-500-241-21	BEAD, FERRITE (CHIP)	
L910	1-500-241-21	BEAD, FERRITE (CHIP)	
L913	1-500-241-21	BEAD, FERRITE (CHIP)	
L914	1-500-241-21	BEAD, FERRITE (CHIP)	
L915	1-500-241-21	BEAD, FERRITE (CHIP)	
L916	1-500-241-21	BEAD, FERRITE (CHIP)	
L923	1-500-241-21	BEAD, FERRITE (CHIP)	
L924	1-500-241-21	BEAD, FERRITE (CHIP)	
L971	1-543-948-11	BEAD, FERRITE (CHIP)	
L972	1-543-948-11	BEAD, FERRITE (CHIP)	
L973	1-543-948-11	BEAD, FERRITE (CHIP)	

< IC LINK >

Ref. No.	Part No.	Description	Remark
⚠PS700	1-532-637-00	LINK, IC 1.0A (ICP-N25)	
⚠PS701	1-532-637-00	LINK, IC 1.0A (ICP-N25)	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q001	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q002	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q003	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q004	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q006	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q007	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q008	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q010	8-729-427-74	TRANSISTOR XP4601	
Q012	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q013	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q014	8-729-427-83	TRANSISTOR XP6501	
Q015	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q016	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q017	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q018	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q019	8-729-427-83	TRANSISTOR XP6501	
Q020	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q021	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q022	8-729-427-83	TRANSISTOR XP6501	
Q025	8-729-402-42	TRANSISTOR UN5213	
Q031	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q033	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q035	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q037	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q038	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q039	8-729-427-83	TRANSISTOR XP6501	
Q040	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q041	8-729-427-83	TRANSISTOR XP6501	
Q042	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q043	8-729-427-83	TRANSISTOR XP6501	

Ref. No.	Part No.	Description	Remark
Q047	8-729-427-74	TRANSISTOR XP4601	
Q048	8-729-427-74	TRANSISTOR XP4601	
Q049	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q050	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q051	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q052	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q054	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q055	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q056	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q057	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q058	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q059	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q065	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q067	8-729-402-42	TRANSISTOR UN5213	
Q068	8-729-402-42	TRANSISTOR UN5213	
Q071	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q402	8-729-013-37	TRANSISTOR 2SC4213-AB-TE85L	
Q403	8-729-013-37	TRANSISTOR 2SC4213-AB-TE85L	
Q404	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q430	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q502	8-729-013-37	TRANSISTOR 2SC4213-AB-TE85L	
Q503	8-729-013-37	TRANSISTOR 2SC4213-AB-TE85L	
Q504	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q530	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q600	8-729-427-83	TRANSISTOR XP6501	
Q604	8-729-209-15	TRANSISTOR 2SD2012	
Q605	8-729-101-07	TRANSISTOR 2SB798-DL	
Q606	8-729-101-07	TRANSISTOR 2SB798-DL	
Q608	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q610	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q611	8-729-015-76	TRANSISTOR UN5211	
Q612	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q613	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q614	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q615	8-729-015-74	TRANSISTOR UN5111	
Q616	8-729-015-76	TRANSISTOR UN5211	
Q617	8-729-402-42	TRANSISTOR UN5213	
Q618	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q619	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q620	8-729-905-38	TRANSISTOR 2SC4081T106R	
Q621	8-729-015-74	TRANSISTOR UN5111	
Q623	8-729-427-83	TRANSISTOR XP6501	
Q624	8-729-403-35	TRANSISTOR UN5113	
Q701	8-729-402-42	TRANSISTOR UN5213	
Q750	8-729-015-76	TRANSISTOR UN5211	
Q751	8-729-402-42	TRANSISTOR UN5213	
Q770	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q771	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q772	8-729-807-87	TRANSISTOR 2SB1295-UL6	
Q773	8-729-402-42	TRANSISTOR UN5213	
Q774	8-729-015-76	TRANSISTOR UN5211	
Q870	8-729-403-35	TRANSISTOR UN5113	
Q871	8-729-101-07	TRANSISTOR 2SB798-DL	
Q872	8-729-403-35	TRANSISTOR UN5113	
Q873	8-729-427-70	TRANSISTOR XP4401	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R001	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R002	1-216-809-11	METAL CHIP 100 5% 1/16W	
R003	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	

Ref. No.	Part No.	Description			Remark
R004	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R005	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R006	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R007	1-216-845-11	METAL CHIP	100K	5%	1/16W
R008	1-216-809-11	METAL CHIP	100	5%	1/16W
R009	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R010	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R011	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R012	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R013	1-216-821-11	METAL CHIP	1K	5%	1/16W
R014	1-216-833-11	METAL CHIP	10K	5%	1/16W
R015	1-216-833-11	METAL CHIP	10K	5%	1/16W
R016	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R017	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (DSR-30P)
R023	1-216-864-11	METAL CHIP	0	5%	1/16W
R024	1-216-864-11	METAL CHIP	0	5%	1/16W
R025	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R026	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R027	1-216-864-11	METAL CHIP	0	5%	1/16W
R028	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R029	1-216-809-11	METAL CHIP	100	5%	1/16W
R030	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R034	1-216-837-11	METAL CHIP	22K	5%	1/16W
R035	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R036	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R037	1-216-813-11	METAL CHIP	220	5%	1/16W
R039	1-216-837-11	METAL CHIP	22K	5%	1/16W
R040	1-216-821-11	METAL CHIP	1K	5%	1/16W
R041	1-216-819-11	METAL CHIP	680	5%	1/16W
R042	1-216-819-11	METAL CHIP	680	5%	1/16W
R043	1-216-837-11	METAL CHIP	22K	5%	1/16W
R044	1-216-819-11	METAL CHIP	680	5%	1/16W
R045	1-216-864-11	METAL CHIP	0	5%	1/16W
R047	1-216-821-11	METAL CHIP	1K	5%	1/16W
R048	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R049	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R050	1-216-864-11	METAL CHIP	0	5%	1/16W
R051	1-216-817-11	METAL CHIP	470	5%	1/16W
R052	1-216-812-11	METAL CHIP	180	5%	1/16W
R053	1-216-864-11	METAL CHIP	0	5%	1/16W
R054	1-216-817-11	METAL CHIP	470	5%	1/16W
R055	1-216-833-11	METAL CHIP	10K	5%	1/16W
R056	1-216-833-11	METAL CHIP	10K	5%	1/16W
R057	1-216-834-11	METAL CHIP	12K	5%	1/16W
R058	1-216-836-11	METAL CHIP	18K	5%	1/16W
R059	1-216-832-11	METAL CHIP	8.2K	5%	1/16W (DSR-30)
R059	1-216-834-11	METAL CHIP	12K	5%	1/16W (DSR-30P)
R060	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R061	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R062	1-216-848-11	METAL CHIP	180K	5%	1/16W
R063	1-216-817-11	METAL CHIP	470	5%	1/16W
R064	1-216-821-11	METAL CHIP	1K	5%	1/16W (DSR-30)
R064	1-216-833-11	METAL CHIP	10K	5%	1/16W (DSR-30P)
R065	1-216-827-11	METAL CHIP	3.3K	5%	1/16W (DSR-30)

Ref. No.	Part No.	Description			Remark
R065	1-216-833-11	METAL CHIP	10K	5%	1/16W (DSR-30P)
R066	1-216-841-11	METAL CHIP	47K	5%	1/16W (DSR-30)
R066	1-216-845-11	METAL CHIP	100K	5%	1/16W (DSR-30P)
R067	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R068	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R069	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R070	1-216-833-11	METAL CHIP	10K	5%	1/16W (DSR-30P)
R071	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R073	1-216-864-11	METAL CHIP	0	5%	1/16W
R074	1-216-834-11	METAL CHIP	12K	5%	1/16W (DSR-30P)
R074	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R075	1-216-835-11	METAL CHIP	15K	5%	1/16W (DSR-30P)
R076	1-218-273-11	METAL GLAZE	510K	5%	1/16W
R077	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (DSR-30P)
R078	1-216-864-11	METAL CHIP	0	5%	1/16W
R080	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R081	1-216-818-11	METAL CHIP	560	5%	1/16W
R082	1-216-818-11	METAL CHIP	560	5%	1/16W
R083	1-216-837-11	METAL CHIP	22K	5%	1/16W
R084	1-216-818-11	METAL CHIP	560	5%	1/16W
R085	1-216-809-11	METAL CHIP	100	5%	1/16W
R086	1-216-821-11	METAL CHIP	1K	5%	1/16W
R087	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R088	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R089	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R090	1-216-818-11	METAL CHIP	560	5%	1/16W
R091	1-216-818-11	METAL CHIP	560	5%	1/16W
R092	1-216-837-11	METAL CHIP	22K	5%	1/16W
R093	1-216-818-11	METAL CHIP	560	5%	1/16W
R094	1-216-809-11	METAL CHIP	100	5%	1/16W
R095	1-216-821-11	METAL CHIP	1K	5%	1/16W
R096	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R097	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R098	1-216-821-11	METAL CHIP	1K	5%	1/16W
R099	1-216-821-11	METAL CHIP	1K	5%	1/16W
R100	1-216-821-11	METAL CHIP	1K	5%	1/16W
R101	1-216-821-11	METAL CHIP	1K	5%	1/16W
R102	1-216-864-11	METAL CHIP	0	5%	1/16W
R103	1-216-864-11	METAL CHIP	0	5%	1/16W
R104	1-216-840-11	METAL CHIP	39K	5%	1/16W
R105	1-216-864-11	METAL CHIP	0	5%	1/16W
R106	1-216-864-11	METAL CHIP	0	5%	1/16W
R107	1-216-821-11	METAL CHIP	1K	5%	1/16W
R108	1-216-821-11	METAL CHIP	1K	5%	1/16W
R109	1-216-805-11	METAL CHIP	47	5%	1/16W
R112	1-216-833-11	METAL CHIP	10K	5%	1/16W
R113	1-216-833-11	METAL CHIP	10K	5%	1/16W
R116	1-216-809-11	METAL CHIP	100	5%	1/16W
R119	1-216-809-11	METAL CHIP	100	5%	1/16W
R120	1-216-809-11	METAL CHIP	100	5%	1/16W
R127	1-216-809-11	METAL CHIP	100	5%	1/16W
R130	1-216-829-11	METAL CHIP	4.7K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R132	1-216-809-11	METAL CHIP	100	5%	1/16W
R140	1-216-809-11	METAL CHIP	100	5%	1/16W
R144	1-216-809-11	METAL CHIP	100	5%	1/16W
R151	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R152	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R153	1-216-864-11	METAL CHIP	0	5%	1/16W
R154	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R155	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R156	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R157	1-216-864-11	METAL CHIP	0	5%	1/16W
R158	1-216-821-11	METAL CHIP	1K	5%	1/16W
R159	1-216-864-11	METAL CHIP	0	5%	1/16W
R163	1-216-841-11	METAL CHIP	47K	5%	1/16W
R164	1-216-841-11	METAL CHIP	47K	5%	1/16W
R170	1-216-821-11	METAL CHIP	1K	5%	1/16W
R171	1-216-833-11	METAL CHIP	10K	5%	1/16W
R172	1-216-833-11	METAL CHIP	10K	5%	1/16W
R173	1-216-837-11	METAL CHIP	22K	5%	1/16W (DSR-30P)
R174	1-216-837-11	METAL CHIP	22K	5%	1/16W (DSR-30P)
R175	1-216-835-11	METAL CHIP	15K	5%	1/16W
R176	1-216-833-11	METAL CHIP	10K	5%	1/16W
R177	1-216-864-11	METAL CHIP	0	5%	1/16W
R178	1-216-821-11	METAL CHIP	1K	5%	1/16W
R182	1-216-835-11	METAL CHIP	15K	5%	1/16W
R183	1-216-833-11	METAL CHIP	10K	5%	1/16W
R185	1-216-817-11	METAL CHIP	470	5%	1/16W
R187	1-216-835-11	METAL CHIP	15K	5%	1/16W
R188	1-216-833-11	METAL CHIP	10K	5%	1/16W
R190	1-216-817-11	METAL CHIP	470	5%	1/16W
R191	1-216-864-11	METAL CHIP	0	5%	1/16W
R195	1-216-821-11	METAL CHIP	1K	5%	1/16W
R196	1-216-821-11	METAL CHIP	1K	5%	1/16W
R197	1-216-821-11	METAL CHIP	1K	5%	1/16W
R198	1-216-821-11	METAL CHIP	1K	5%	1/16W
R201	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R202	1-216-849-11	METAL CHIP	220K	5%	1/16W
R203	1-216-864-11	METAL CHIP	0	5%	1/16W
R204	1-216-833-11	METAL CHIP	10K	5%	1/16W
R205	1-216-864-11	METAL CHIP	0	5%	1/16W
R206	1-216-833-11	METAL CHIP	10K	5%	1/16W
R207	1-216-833-11	METAL CHIP	10K	5%	1/16W
R208	1-216-864-11	METAL CHIP	0	5%	1/16W
R210	1-216-864-11	METAL CHIP	0	5%	1/16W
R212	1-216-864-11	METAL CHIP	0	5%	1/16W
R214	1-216-864-11	METAL CHIP	0	5%	1/16W
R216	1-216-864-11	METAL CHIP	0	5%	1/16W
R217	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R218	1-216-864-11	METAL CHIP	0	5%	1/16W
R219	1-216-845-11	METAL CHIP	100K	5%	1/16W
R220	1-216-845-11	METAL CHIP	100K	5%	1/16W
R221	1-216-845-11	METAL CHIP	100K	5%	1/16W
R222	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R223	1-216-864-11	METAL CHIP	0	5%	1/16W
R224	1-216-864-11	METAL CHIP	0	5%	1/16W
R226	1-216-864-11	METAL CHIP	0	5%	1/16W
R227	1-216-845-11	METAL CHIP	100K	5%	1/16W
R228	1-216-864-11	METAL CHIP	0	5%	1/16W
R230	1-216-845-11	METAL CHIP	100K	5%	1/16W
R233	1-216-837-11	METAL CHIP	22K	5%	1/16W
R234	1-216-819-11	METAL CHIP	680	5%	1/16W
R235	1-216-837-11	METAL CHIP	22K	5%	1/16W
R236	1-216-819-11	METAL CHIP	680	5%	1/16W
R237	1-216-817-11	METAL CHIP	470	5%	1/16W
R238	1-216-817-11	METAL CHIP	470	5%	1/16W
R239	1-216-821-11	METAL CHIP	1K	5%	1/16W
R241	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R242	1-216-821-11	METAL CHIP	1K	5%	1/16W
R243	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R251	1-216-837-11	METAL CHIP	22K	5%	1/16W
R252	1-216-819-11	METAL CHIP	680	5%	1/16W
R253	1-216-864-11	METAL CHIP	0	5%	1/16W
R254	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R255	1-216-821-11	METAL CHIP	1K	5%	1/16W
R256	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R257	1-216-837-11	METAL CHIP	22K	5%	1/16W
R258	1-216-819-11	METAL CHIP	680	5%	1/16W
R259	1-216-864-11	METAL CHIP	0	5%	1/16W
R260	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R261	1-216-821-11	METAL CHIP	1K	5%	1/16W
R262	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R263	1-216-817-11	METAL CHIP	470	5%	1/16W
R265	1-216-813-11	METAL CHIP	220	5%	1/16W
R266	1-216-821-11	METAL CHIP	1K	5%	1/16W
R271	1-216-817-11	METAL CHIP	470	5%	1/16W
R272	1-216-847-11	METAL CHIP	150K	5%	1/16W
R273	1-216-818-11	METAL CHIP	560	5%	1/16W
R274	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R276	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R278	1-216-809-11	METAL CHIP	100	5%	1/16W
R281	1-216-839-11	METAL CHIP	33K	5%	1/16W (DSR-30P)
R281	1-216-841-11	METAL CHIP	47K	5%	1/16W (DSR-30)
R282	1-216-836-11	METAL CHIP	18K	5%	1/16W
R283	1-216-833-11	METAL CHIP	10K	5%	1/16W
R284	1-216-842-11	METAL CHIP	56K	5%	1/16W
R285	1-216-839-11	METAL CHIP	33K	5%	1/16W
R286	1-216-841-11	METAL CHIP	47K	5%	1/16W
R287	1-216-833-11	METAL CHIP	10K	5%	1/16W
R288	1-216-842-11	METAL CHIP	56K	5%	1/16W
R289	1-216-839-11	METAL CHIP	33K	5%	1/16W
R290	1-216-841-11	METAL CHIP	47K	5%	1/16W
R298	1-216-864-11	METAL CHIP	0	5%	1/16W
R299	1-216-864-11	METAL CHIP	0	5%	1/16W
R300	1-216-864-11	METAL CHIP	0	5%	1/16W
R304	1-216-821-11	METAL CHIP	1K	5%	1/16W
R306	1-216-821-11	METAL CHIP	1K	5%	1/16W
R307	1-216-833-11	METAL CHIP	10K	5%	1/16W
R308	1-216-803-11	METAL CHIP	33	5%	1/16W
R309	1-216-803-11	METAL CHIP	33	5%	1/16W
R310	1-216-833-11	METAL CHIP	10K	5%	1/16W
R311	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R312	1-216-833-11	METAL CHIP	10K	5%	1/16W
R313	1-218-285-11	METAL GLAZE	75	5%	1/16W
R314	1-218-285-11	METAL GLAZE	75	5%	1/16W
R315	1-218-285-11	METAL GLAZE	75	5%	1/16W
R316	1-218-285-11	METAL GLAZE	75	5%	1/16W
R317	1-216-804-11	METAL CHIP	39	5%	1/16W
R318	1-216-804-11	METAL CHIP	39	5%	1/16W
R319	1-216-821-11	METAL CHIP	1K	5%	1/16W
R320	1-216-841-11	METAL CHIP	47K	5%	1/16W
R321	1-216-841-11	METAL CHIP	47K	5%	1/16W
R323	1-216-841-11	METAL CHIP	47K	5%	1/16W
R325	1-216-821-11	METAL CHIP	1K	5%	1/16W
R326	1-216-833-11	METAL CHIP	10K	5%	1/16W
R336	1-216-853-11	METAL CHIP	470K	5%	1/16W
R337	1-216-833-11	METAL CHIP	10K	5%	1/16W
R338	1-216-833-11	METAL CHIP	10K	5%	1/16W
R351	1-216-841-11	METAL CHIP	47K	5%	1/16W
R352	1-216-841-11	METAL CHIP	47K	5%	1/16W
R353	1-216-813-11	METAL CHIP	220	5%	1/16W
R354	1-216-849-11	METAL CHIP	220K	5%	1/16W
R355	1-216-837-11	METAL CHIP	22K	5%	1/16W
R356	1-216-839-11	METAL CHIP	33K	5%	1/16W
R357	1-216-817-11	METAL CHIP	470	5%	1/16W
R358	1-216-816-11	METAL CHIP	390	5%	1/16W
R359	1-216-817-11	METAL CHIP	470	5%	1/16W
R360	1-216-821-11	METAL CHIP	1K	5%	1/16W
R361	1-216-864-11	METAL CHIP	0	5%	1/16W
R362	1-216-821-11	METAL CHIP	1K	5%	1/16W
R364	1-216-815-11	METAL CHIP	330	5%	1/16W
R366	1-216-821-11	METAL CHIP	1K	5%	1/16W
R372	1-216-837-11	METAL CHIP	22K	5%	1/16W
R373	1-216-836-11	METAL CHIP	18K	5%	1/16W
R374	1-216-833-11	METAL CHIP	10K	5%	1/16W
R380	1-216-821-11	METAL CHIP	1K	5%	1/16W
R381	1-216-841-11	METAL CHIP	47K	5%	1/16W
R382	1-216-841-11	METAL CHIP	47K	5%	1/16W
R383	1-216-821-11	METAL CHIP	1K	5%	1/16W
R384	1-216-845-11	METAL CHIP	100K	5%	1/16W
R385	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R386	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R387	1-216-833-11	METAL CHIP	10K	5%	1/16W
R388	1-216-857-11	METAL CHIP	1M	5%	1/16W
R389	1-216-864-11	METAL CHIP	0	5%	1/16W
R390	1-216-864-11	METAL CHIP	0	5%	1/16W
R395	1-216-841-11	METAL CHIP	47K	5%	1/16W
R396	1-216-833-11	METAL CHIP	10K	5%	1/16W
R397	1-216-841-11	METAL CHIP	47K	5%	1/16W
R398	1-216-841-11	METAL CHIP	47K	5%	1/16W
R401	1-216-833-11	METAL CHIP	10K	5%	1/16W
R402	1-216-836-11	METAL CHIP	18K	5%	1/16W
R403	1-216-833-11	METAL CHIP	10K	5%	1/16W
R405	1-216-797-11	METAL CHIP	10	5%	1/16W
R406	1-216-836-11	METAL CHIP	18K	5%	1/16W
R409	1-216-837-11	METAL CHIP	22K	5%	1/16W
R410	1-216-849-11	METAL CHIP	220K	5%	1/16W
R411	1-216-839-11	METAL CHIP	33K	5%	1/16W
R412	1-216-839-11	METAL CHIP	33K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R413	1-216-833-11	METAL CHIP	10K	5%	1/16W
R414	1-216-833-11	METAL CHIP	10K	5%	1/16W
R415	1-216-837-11	METAL CHIP	22K	5%	1/16W
R416	1-216-833-11	METAL CHIP	10K	5%	1/16W
R417	1-216-837-11	METAL CHIP	22K	5%	1/16W
R430	1-216-809-11	METAL CHIP	100	5%	1/16W
R433	1-216-821-11	METAL CHIP	1K	5%	1/16W
R434	1-216-833-11	METAL CHIP	10K	5%	1/16W
R436	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R437	1-216-809-11	METAL CHIP	100	5%	1/16W
R438	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R439	1-216-833-11	METAL CHIP	10K	5%	1/16W
R440	1-216-833-11	METAL CHIP	10K	5%	1/16W
R441	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R442	1-216-833-11	METAL CHIP	10K	5%	1/16W
R448	1-216-857-11	METAL CHIP	1M	5%	1/16W
R449	1-216-809-11	METAL CHIP	100	5%	1/16W
R452	1-216-817-11	METAL CHIP	470	5%	1/16W
R453	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R454	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R455	1-216-839-11	METAL CHIP	33K	5%	1/16W
R456	1-216-839-11	METAL CHIP	33K	5%	1/16W
R457	1-216-833-11	METAL CHIP	10K	5%	1/16W
R458	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R459	1-216-833-11	METAL CHIP	10K	5%	1/16W
R460	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R481	1-216-809-11	METAL CHIP	100	5%	1/16W
R482	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R483	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R484	1-216-833-11	METAL CHIP	10K	5%	1/16W
R485	1-216-833-11	METAL CHIP	10K	5%	1/16W
R487	1-216-833-11	METAL CHIP	10K	5%	1/16W
R488	1-216-838-11	METAL CHIP	27K	5%	1/16W
R489	1-216-833-11	METAL CHIP	10K	5%	1/16W
R490	1-216-833-11	METAL CHIP	10K	5%	1/16W
R491	1-216-833-11	METAL CHIP	10K	5%	1/16W
R492	1-216-815-11	METAL CHIP	330	5%	1/16W
R493	1-216-833-11	METAL CHIP	10K	5%	1/16W
R494	1-216-833-11	METAL CHIP	10K	5%	1/16W
R495	1-216-833-11	METAL CHIP	10K	5%	1/16W
R496	1-216-841-11	METAL CHIP	47K	5%	1/16W
R497	1-218-878-11	METAL GLAZE	20K	0.50%	1/16W
R498	1-216-809-11	METAL CHIP	100	5%	1/16W
R500	1-216-833-11	METAL CHIP	10K	5%	1/16W
R507	1-216-833-11	METAL CHIP	10K	5%	1/16W
R508	1-216-833-11	METAL CHIP	10K	5%	1/16W
R509	1-216-837-11	METAL CHIP	22K	5%	1/16W
R510	1-216-849-11	METAL CHIP	220K	5%	1/16W
R511	1-216-839-11	METAL CHIP	33K	5%	1/16W
R512	1-216-839-11	METAL CHIP	33K	5%	1/16W
R513	1-216-833-11	METAL CHIP	10K	5%	1/16W
R514	1-216-833-11	METAL CHIP	10K	5%	1/16W
R515	1-216-837-11	METAL CHIP	22K	5%	1/16W
R516	1-216-833-11	METAL CHIP	10K	5%	1/16W
R517	1-216-837-11	METAL CHIP	22K	5%	1/16W
R530	1-216-809-11	METAL CHIP	100	5%	1/16W
R533	1-216-821-11	METAL CHIP	1K	5%	1/16W
R534	1-216-833-11	METAL CHIP	10K	5%	1/16W
R536	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R537	1-216-809-11	METAL CHIP	100	5%	1/16W
R538	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R539	1-216-833-11	METAL CHIP	10K	5%	1/16W
R540	1-216-833-11	METAL CHIP	10K	5%	1/16W
R541	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R542	1-216-833-11	METAL CHIP	10K	5%	1/16W
R548	1-216-857-11	METAL CHIP	1M	5%	1/16W
R549	1-216-809-11	METAL CHIP	100	5%	1/16W
R555	1-216-837-11	METAL CHIP	22K	5%	1/16W
R557	1-216-833-11	METAL CHIP	10K	5%	1/16W
R558	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R559	1-216-833-11	METAL CHIP	10K	5%	1/16W
R560	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R581	1-216-809-11	METAL CHIP	100	5%	1/16W
R582	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R583	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R584	1-216-833-11	METAL CHIP	10K	5%	1/16W
R585	1-216-833-11	METAL CHIP	10K	5%	1/16W
R587	1-216-864-11	METAL CHIP	0	5%	1/16W
R588	1-216-838-11	METAL CHIP	27K	5%	1/16W
R589	1-216-833-11	METAL CHIP	10K	5%	1/16W
R590	1-216-833-11	METAL CHIP	10K	5%	1/16W
R591	1-216-845-11	METAL CHIP	100K	5%	1/16W
R592	1-216-815-11	METAL CHIP	330	5%	1/16W
R593	1-216-833-11	METAL CHIP	10K	5%	1/16W
R594	1-216-833-11	METAL CHIP	10K	5%	1/16W
R595	1-216-833-11	METAL CHIP	10K	5%	1/16W
R596	1-216-841-11	METAL CHIP	47K	5%	1/16W
R597	1-218-878-11	METAL GLAZE	20K	0.50%	1/16W
R598	1-216-809-11	METAL CHIP	100	5%	1/16W
R600	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R608	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R609	1-216-833-11	METAL CHIP	10K	5%	1/16W
R610	1-247-737-11	CARBON	68	5%	1/2W F
R611	1-249-399-11	CARBON	33	5%	1/4W F
R612	1-216-833-11	METAL CHIP	10K	5%	1/16W
R613	1-216-815-11	METAL CHIP	330	5%	1/16W
R614	1-216-676-11	METAL CHIP	11K	0.5%	1/10W
R615	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R616	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R617	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R618	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R619	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R620	1-216-676-11	METAL CHIP	11K	0.5%	1/10W
R621	1-216-809-11	METAL CHIP	100	5%	1/16W
R622	1-216-809-11	METAL CHIP	100	5%	1/16W
R623	1-216-797-11	METAL CHIP	10	5%	1/16W
R629	1-216-833-11	METAL CHIP	10K	5%	1/16W
R630	1-216-845-11	METAL CHIP	100K	5%	1/16W
R631	1-216-845-11	METAL CHIP	100K	5%	1/16W
R632	1-216-809-11	METAL CHIP	100	5%	1/16W
R633	1-216-849-11	METAL CHIP	220K	5%	1/16W
R634	1-216-845-11	METAL CHIP	100K	5%	1/16W
R635	1-216-864-11	METAL CHIP	0	5%	1/16W
R637	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R640	1-216-864-11	METAL CHIP	0	5%	1/16W
R641	1-216-194-00	METAL CHIP	680	5%	1/8W
R642	1-216-194-00	METAL CHIP	680	5%	1/8W
R643	1-216-864-11	METAL CHIP	0	5%	1/16W
R644	1-216-833-11	METAL CHIP	10K	5%	1/16W
R645	1-216-845-11	METAL CHIP	100K	5%	1/16W
R646	1-216-845-11	METAL CHIP	100K	5%	1/16W
R647	1-216-833-11	METAL CHIP	10K	5%	1/16W
R648	1-216-833-11	METAL CHIP	10K	5%	1/16W
R649	1-216-833-11	METAL CHIP	10K	5%	1/16W
R650	1-216-809-11	METAL CHIP	100	5%	1/16W
R651	1-216-797-11	METAL CHIP	10	5%	1/16W
R652	1-216-833-11	METAL CHIP	10K	5%	1/16W
R653	1-216-845-11	METAL CHIP	100K	5%	1/16W
R655	1-216-864-11	METAL CHIP	0	5%	1/16W
R657	1-216-845-11	METAL CHIP	100K	5%	1/16W
R658	1-216-845-11	METAL CHIP	100K	5%	1/16W
R659	1-216-845-11	METAL CHIP	100K	5%	1/16W
R660	1-216-845-11	METAL CHIP	100K	5%	1/16W
R661	1-216-845-11	METAL CHIP	100K	5%	1/16W
R662	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R663	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R664	1-216-182-00	METAL GLAZE	220	5%	1/8W
R665	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R667	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R668	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R671	1-216-864-11	METAL CHIP	0	5%	1/16W
R699	1-216-864-11	METAL CHIP	0	5%	1/16W
R700	1-216-821-11	METAL CHIP	1K	5%	1/16W
R701	1-216-845-11	METAL CHIP	100K	5%	1/16W
R702	1-216-797-11	METAL CHIP	10	5%	1/16W
R703	1-216-833-11	METAL CHIP	10K	5%	1/16W
R704	1-216-833-11	METAL CHIP	10K	5%	1/16W
R705	1-216-797-11	METAL CHIP	10	5%	1/16W
R706	1-216-797-11	METAL CHIP	10	5%	1/16W
R707	1-216-797-11	METAL CHIP	10	5%	1/16W
R708	1-216-797-11	METAL CHIP	10	5%	1/16W
R709	1-216-797-11	METAL CHIP	10	5%	1/16W
R710	1-216-809-11	METAL CHIP	100	5%	1/16W
R711	1-216-841-11	METAL CHIP	47K	5%	1/16W
R712	1-216-851-11	METAL CHIP	330K	5%	1/16W
R713	1-216-841-11	METAL CHIP	47K	5%	1/16W
R714	1-216-821-11	METAL CHIP	1K	5%	1/16W
R715	1-216-797-11	METAL CHIP	10	5%	1/16W
R716	1-216-833-11	METAL CHIP	10K	5%	1/16W
R717	1-216-821-11	METAL CHIP	1K	5%	1/16W
R719	1-216-821-11	METAL CHIP	1K	5%	1/16W
R720	1-216-821-11	METAL CHIP	1K	5%	1/16W
R721	1-216-821-11	METAL CHIP	1K	5%	1/16W
R722	1-216-809-11	METAL CHIP	100	5%	1/16W
R724	1-216-809-11	METAL CHIP	100	5%	1/16W
R725	1-216-833-11	METAL CHIP	10K	5%	1/16W
R726	1-216-833-11	METAL CHIP	10K	5%	1/16W
R727	1-216-833-11	METAL CHIP	10K	5%	1/16W
R740	1-216-833-11	METAL CHIP	10K	5%	1/16W
R743	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R750	1-216-864-11	METAL CHIP	0	5%	1/16W
R751	1-216-864-11	METAL CHIP	0	5%	1/16W
R752	1-216-864-11	METAL CHIP	0	5%	1/16W
R753	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R754	1-216-821-11	METAL CHIP	1K	5%	1/16W
R755	1-216-821-11	METAL CHIP	1K	5%	1/16W
R756	1-216-821-11	METAL CHIP	1K	5%	1/16W
R757	1-216-833-11	METAL CHIP	10K	5%	1/16W
R759	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R760	1-216-833-11	METAL CHIP	10K	5%	1/16W
R761	1-216-833-11	METAL CHIP	10K	5%	1/16W
R762	1-216-833-11	METAL CHIP	10K	5%	1/16W
R763	1-216-853-11	METAL CHIP	470K	5%	1/16W
R764	1-218-857-11	METAL GLAZE	2.7K	0.50%	1/16W
R765	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R766	1-216-833-11	METAL CHIP	10K	5%	1/16W
R767	1-216-821-11	METAL CHIP	1K	5%	1/16W
R768	1-216-311-00	METAL CHIP	6.8	5%	1/10W
R769	1-216-833-11	METAL CHIP	10K	5%	1/16W
R770	1-216-841-11	METAL CHIP	47K	5%	1/16W
R771	1-216-833-11	METAL CHIP	10K	5%	1/16W
R772	1-216-845-11	METAL CHIP	100K	5%	1/16W
R773	1-216-864-11	METAL CHIP	0	5%	1/16W
R774	1-216-797-11	METAL CHIP	10	5%	1/16W
R775	1-216-833-11	METAL CHIP	10K	5%	1/16W
R776	1-216-833-11	METAL CHIP	10K	5%	1/16W
R777	1-216-833-11	METAL CHIP	10K	5%	1/16W
R778	1-216-797-11	METAL CHIP	10	5%	1/16W
R779	1-216-797-11	METAL CHIP	10	5%	1/16W
R780	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R781	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R782	1-216-797-11	METAL CHIP	10	5%	1/16W
R783	1-216-821-11	METAL CHIP	1K	5%	1/16W
R784	1-216-797-11	METAL CHIP	10	5%	1/16W
R802	1-216-841-11	METAL CHIP	47K	5%	1/16W
R803	1-216-841-11	METAL CHIP	47K	5%	1/16W
R804	1-216-841-11	METAL CHIP	47K	5%	1/16W
R805	1-216-841-11	METAL CHIP	47K	5%	1/16W
R806	1-216-841-11	METAL CHIP	47K	5%	1/16W
R807	1-216-841-11	METAL CHIP	47K	5%	1/16W
R808	1-216-841-11	METAL CHIP	47K	5%	1/16W
R809	1-216-841-11	METAL CHIP	47K	5%	1/16W
R810	1-216-821-11	METAL CHIP	1K	5%	1/16W
R811	1-216-821-11	METAL CHIP	1K	5%	1/16W
R812	1-216-821-11	METAL CHIP	1K	5%	1/16W
R813	1-216-821-11	METAL CHIP	1K	5%	1/16W
R814	1-216-821-11	METAL CHIP	1K	5%	1/16W
R815	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R816	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R817	1-216-821-11	METAL CHIP	1K	5%	1/16W
R818	1-216-845-11	METAL CHIP	100K	5%	1/16W
R819	1-216-857-11	METAL CHIP	1M	5%	1/16W
R820	1-216-821-11	METAL CHIP	1K	5%	1/16W
R821	1-216-821-11	METAL CHIP	1K	5%	1/16W
R822	1-216-821-11	METAL CHIP	1K	5%	1/16W
R823	1-216-821-11	METAL CHIP	1K	5%	1/16W
R824	1-216-809-11	METAL CHIP	100	5%	1/16W
R825	1-216-809-11	METAL CHIP	100	5%	1/16W
R826	1-216-809-11	METAL CHIP	100	5%	1/16W
R827	1-216-864-11	METAL CHIP	0	5%	1/16W
R828	1-216-864-11	METAL CHIP	0	5%	1/16W
R829	1-216-864-11	METAL CHIP	0	5%	1/16W
R830	1-216-864-11	METAL CHIP	0	5%	1/16W
R831	1-216-864-11	METAL CHIP	0	5%	1/16W
R832	1-216-864-11	METAL CHIP	0	5%	1/16W
R833	1-216-809-11	METAL CHIP	100	5%	1/16W
R834	1-216-841-11	METAL CHIP	47K	5%	1/16W
R835	1-216-841-11	METAL CHIP	47K	5%	1/16W
R836	1-216-841-11	METAL CHIP	47K	5%	1/16W
R837	1-216-841-11	METAL CHIP	47K	5%	1/16W
R838	1-216-841-11	METAL CHIP	47K	5%	1/16W
R839	1-216-841-11	METAL CHIP	47K	5%	1/16W
R840	1-216-841-11	METAL CHIP	47K	5%	1/16W
R841	1-216-841-11	METAL CHIP	47K	5%	1/16W
R842	1-216-841-11	METAL CHIP	47K	5%	1/16W
R843	1-216-841-11	METAL CHIP	47K	5%	1/16W
R844	1-216-841-11	METAL CHIP	47K	5%	1/16W
R845	1-216-841-11	METAL CHIP	47K	5%	1/16W
R846	1-216-841-11	METAL CHIP	47K	5%	1/16W
R847	1-216-841-11	METAL CHIP	47K	5%	1/16W
R848	1-216-841-11	METAL CHIP	47K	5%	1/16W
R849	1-216-841-11	METAL CHIP	47K	5%	1/16W
R850	1-216-841-11	METAL CHIP	47K	5%	1/16W
R851	1-216-841-11	METAL CHIP	47K	5%	1/16W
R852	1-216-809-11	METAL CHIP	100	5%	1/16W
R853	1-216-841-11	METAL CHIP	47K	5%	1/16W
R854	1-216-841-11	METAL CHIP	47K	5%	1/16W
R855	1-216-864-11	METAL CHIP	0	5%	1/16W
R856	1-216-809-11	METAL CHIP	100	5%	1/16W
R857	1-216-841-11	METAL CHIP	47K	5%	1/16W
R858	1-216-857-11	METAL CHIP	1M	5%	1/16W
R859	1-216-841-11	METAL CHIP	47K	5%	1/16W
R860	1-216-821-11	METAL CHIP	1K	5%	1/16W
R861	1-216-864-11	METAL CHIP	0	5%	1/16W
R862	1-216-864-11	METAL CHIP	0	5%	1/16W
R863	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R864	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R865	1-216-809-11	METAL CHIP	100	5%	1/16W
R866	1-216-809-11	METAL CHIP	100	5%	1/16W
R867	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R868	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R869	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R870	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R871	1-216-791-11	METAL CHIP	3.3	5%	1/16W
R872	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R873	1-216-821-11	METAL CHIP	1K	5%	1/16W
R874	1-216-841-11	METAL CHIP	47K	5%	1/16W
R875	1-216-841-11	METAL CHIP	47K	5%	1/16W
R876	1-216-841-11	METAL CHIP	47K	5%	1/16W
R877	1-216-841-11	METAL CHIP	47K	5%	1/16W
R901	1-218-285-11	METAL GLAZE	75	5%	1/16W
R903	1-218-285-11	METAL GLAZE	75	5%	1/16W
R911	1-216-809-11	METAL CHIP	100	5%	1/16W
R912	1-216-809-11	METAL CHIP	100	5%	1/16W
R917	1-216-809-11	METAL CHIP	100	5%	1/16W
R918	1-216-809-11	METAL CHIP	100	5%	1/16W
R928	1-216-864-11	METAL CHIP	0	5%	1/16W
R929	1-218-285-11	METAL GLAZE	75	5%	1/16W
R933	1-216-864-11	METAL CHIP	0	5%	1/16W
R934	1-216-833-11	METAL CHIP	10K	5%	1/16W
R950	1-218-629-91	METAL CHIP	180	5%	1W
R951	1-218-629-91	METAL CHIP	180	5%	1W
R952	1-218-629-91	METAL CHIP	180	5%	1W
R953	1-218-629-91	METAL CHIP	180	5%	1W
R954	1-218-629-91	METAL CHIP	180	5%	1W
R955	1-218-629-91	METAL CHIP	180	5%	1W
R992	1-216-296-91	CONDUCTOR, CHIP (3216)			
R993	1-216-296-91	CONDUCTOR, CHIP (3216)			

Ref. No.	Part No.	Description	Remark
R994	1-216-296-91	CONDUCTOR, CHIP (3216)	
R995	1-216-296-91	CONDUCTOR, CHIP (3216)	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV002	1-238-852-11	RES, ADJ, CERMET 470	
RV006	1-238-852-11	RES, ADJ, CERMET 470	
RV007	1-238-852-11	RES, ADJ, CERMET 470	
RV009	1-238-853-11	RES, ADJ, CERMET 1K	
RV013	1-238-857-11	RES, ADJ, CERMET 22K (DSR-30P)	
RV014	1-238-853-11	RES, ADJ, CERMET 1K	
RV015	1-238-853-11	RES, ADJ, CERMET 1K	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S901	1-692-900-11	SWITCH, SLIDE (1-2) (FUNCTION LOCK ON<-OFF)	
S902	1-692-686-11	SWITCH, SLIDE (EXTERNAL TIMER PB<-OFF->REC)	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X001	1-527-396-31	OSCILLATOR, CRYSTAL (3.58MHz)(DSR-30)	
X001	1-567-504-11	OSCILLATOR, CRYSTAL (4MHz)(DSR-30P)	
X002	1-579-738-21	VIBRATOR, CRYSTAL (14.318MHz)(DSR-30)	
X002	1-579-780-21	VIBRATOR, CRYSTAL (17.73MHz)(DSR-30P)	
X003	1-577-165-11	VIBLATOR, CERAMIC (507kHz)	
X004	1-567-900-11	OSCILLATOR, CRYSTAL (14.31818MHz) (DSR-30)	
X004	1-577-289-11	VIBRATOR, CRYSTAL (17.73MHz)(DSR-30P)	
X005	1-579-466-11	VIBRATOR, CRYSTAL (3.58MHz)(DSR-30)	
X005	1-579-661-21	OSCILLATOR, CRYSTAL (4.43MHz)(DSR-30P)	
X006	1-578-689-21	VIBRATOR (8MHz)	
X701	1-579-436-11	VIBLATOR, CRYSTAL (32.768MHz)	
X702	1-579-126-11	VIBRATOR, CERAMIC (12MHz)	
X870	1-579-907-21	VIBRATOR, CERAMIC (20MHz)	

* A-7066-783-A YC-144 (C) BOARD, COMPLETE (DSR-30P)

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* A-7066-923-A YC-144 (G) BOARD, COMPLETE (DSR-30)

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(Ref No. 4,000 Series)

Ref. No.	Part No.	Description	Remark
	1-776-159-11	CABLE, FLAT (FVY-1) 26P	

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C201	1-128-003-11	ELECT CHIP	22uF	20%	4V
C206	1-162-974-11	CERA7IC CHIP	0.01uF		50V
C207	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C208	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C209	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C210	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C211	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C212	1-128-004-11	ELECT CHIP	10uF	20%	16V
C213	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C214	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C215	1-128-004-11	ELECT CHIP	10uF	20%	16V
C216	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C217	1-128-004-11	ELECT CHIP	10uF	20%	16V
C218	1-128-004-11	ELECT CHIP	10uF	20%	16V
C219	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C220	1-128-004-11	ELECT CHIP	10uF	20%	16V
C221	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C222	1-128-012-11	ELECT CHIP	0.47uF	20%	50V
C223	1-128-012-11	ELECT CHIP	0.47uF	20%	50V
C250	1-128-003-11	ELECT CHIP	22uF	20%	4V
C251	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C252	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C253	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C254	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C255	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C257	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C258	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C261	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C271	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C272	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C278	1-128-004-11	ELECT CHIP	10uF	20%	16V
C279	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C280	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C281	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C282	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C283	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C285	1-128-003-11	ELECT CHIP	22uF	20%	4V
C286	1-128-003-11	ELECT CHIP	22uF	20%	4V
C287	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C288	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C289	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C290	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C291	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C352	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C353	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V (DSR-30P)
C353	1-162-911-11	CERAMIC CHIP	6PF	0.5PF	50V (DSR-30)
C354	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C355	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C356	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V (DSR-30P)
C356	1-162-916-11	CERAMIC CHIP	12PF	5%	50V (DSR-30)
C358	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C359	1-128-006-11	ELECT CHIP	4.7uF	20%	25V
C364	1-126-205-11	ELECT CHIP	47uF	20%	6.3V

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN001	1-770-339-11	CONNECTOR, FFC/FPC 26P	

< DIODE >

Ref. No.	Part No.	Description	Remark
D201	8-719-059-51	DIODE MA3J142E0LS0	

< FLUORESCENT INDICATOR >

Ref. No.	Part No.	Description	Remark
FL201	1-233-345-21	FILTER, LOW PASS (5.5MHz)	
FL202	1-233-345-21	FILTER, LOW PASS (5.5MHz)	
FL203	1-233-345-21	FILTER, LOW PASS (5.5MHz)	

< IC >

Ref. No.	Part No.	Description	Remark
IC009	8-759-454-38	IC MC141625AFT	
IC206	8-759-157-22	IC PQ05TZ1U	
IC207	8-759-335-58	IC MM1112XFF	
IC208	8-759-084-76	IC MM1111XF	
IC308	8-759-711-62	IC NJM2240M	

Ref. No.	Part No.	Description			Remark
		< COIL >			
L201	1-414-398-11	INDUCTOR	10uH		
L202	1-414-398-11	INDUCTOR	10uH		
L203	1-414-398-11	INDUCTOR	10uH		
L204	1-414-398-11	INDUCTOR	10uH		
L205	1-414-398-11	INDUCTOR	10uH		
L206	1-414-398-11	INDUCTOR	10uH		
L210	1-414-398-11	INDUCTOR	10uH		
L301	1-410-381-11	INDUCTOR CHIP	10uH		
L304	1-414-404-11	INDUCTOR	100uH		
		< TRANSISTOR >			
Q202	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q203	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q204	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q217	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q221	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q225	8-729-026-52	TRANSISTOR	2SA1576A-T106-R		
Q226	8-729-026-52	TRANSISTOR	2SA1576A-T106-R		
Q227	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q250	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q251	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q252	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q253	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q254	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q255	8-729-905-38	TRANSISTOR	2SC4081T106R		
Q304	8-729-402-42	TRANSISTOR	UN5213		
Q324	8-729-905-38	TRANSISTOR	2SC4081T106R		
		< RESISTOR >			
R200	1-216-864-11	METAL CHIP	0	5%	1/16W
R201	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R202	1-216-840-11	METAL CHIP	39K	5%	1/16W
R204	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R205	1-216-821-11	METAL CHIP	1K	5%	1/16W
R206	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R207	1-216-819-11	METAL CHIP	680	5%	1/16W
R208	1-216-864-11	METAL CHIP	0	5%	1/16W
R210	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R211	1-216-821-11	METAL CHIP	1K	5%	1/16W
R213	1-216-809-11	METAL CHIP	100	5%	1/16W
R214	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R215	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R216	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R218	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R219	1-216-833-11	METAL CHIP	10K	5%	1/16W
R221	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30P)
R222	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-30)
R223	1-216-864-11	METAL CHIP	0	5%	1/16W
R230	1-216-855-11	METAL CHIP	680K	5%	1/16W
R231	1-216-864-11	METAL CHIP	0	5%	1/16W
R240	1-216-864-11	METAL CHIP	0	5%	1/16W
R246	1-216-809-11	METAL CHIP	100	5%	1/16W
R247	1-216-817-11	METAL CHIP	470	5%	1/16W

Ref. No.	Part No.	Description			Remark
R248	1-216-821-11	METAL CHIP	1K	5%	1/16W
R249	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R250	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R251	1-216-809-11	METAL CHIP	100	5%	1/16W
R252	1-216-817-11	METAL CHIP	470	5%	1/16W
R253	1-216-821-11	METAL CHIP	1K	5%	1/16W
R254	1-216-821-11	METAL CHIP	1K	5%	1/16W
R255	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R256	1-216-837-11	METAL CHIP	22K	5%	1/16W
R257	1-216-820-11	METAL CHIP	820	5%	1/16W
R258	1-216-816-11	METAL CHIP	390	5%	1/16W
R259	1-216-821-11	METAL CHIP	1K	5%	1/16W
R262	1-216-864-11	METAL CHIP	0	5%	1/16W
R263	1-216-864-11	METAL CHIP	0	5%	1/16W
R264	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R265	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R266	1-216-819-11	METAL CHIP	680	5%	1/16W
R267	1-216-837-11	METAL CHIP	22K	5%	1/16W
R268	1-216-818-11	METAL CHIP	560	5%	1/16W
R269	1-216-820-11	METAL CHIP	820	5%	1/16W (DSR-30P)
R269	1-218-484-11	METAL GLAZE	750	5%	1/16W (DSR-30)
R271	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R272	1-216-821-11	METAL CHIP	1K	5%	1/16W
R273	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R303	1-216-864-11	METAL CHIP	0	5%	1/16W
R308	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R309	1-216-837-11	METAL CHIP	22K	5%	1/16W
R367	1-216-827-11	METAL CHIP	3.3K	5%	1/16W (DSR-30P)
R367	1-218-707-11	METAL GLAZE	4.3K	5%	1/16W (DSR-30)
R368	1-216-849-11	METAL CHIP	220K	5%	1/16W
R369	1-218-269-11	METAL GLAZE	360	5%	1/16W
R370	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< VARIABLE RESISTOR >			
RV201	1-238-852-11	RES, ADJ, CERMET 470			

MISCELLANEOUS

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111	1-776-157-11	CABLE, FLAT (FVT-3K) 15P
114	1-759-142-41	CONTROLLER
116	1-776-163-11	CABLE, FLAT (FTC-2) 8P
121	1-543-793-11	FILTER, CLAMP (FERRITE CORE)
155	1-776-156-11	CABLE, FLAT (FVF-3J) 17P
161	1-776-160-11	CABLE, FLAT (FVH-1) 11P
163	1-776-854-11	CABLE, FLAT (FJD-1) 17P
170	1-776-161-11	CABLE, FLAT (FFH-18) 25P
203	1-533-183-11	HOLDER, FUSE
206	1-776-159-11	CABLE, FLAT (FVY-1) 26P
208	1-776-158-11	CABLE, FLAT (FVF-4M) 30P
209	1-776-152-11	CABLE, FLAT (FVJ-1) 25P
210	1-776-153-11	CABLE, FLAT (FVJ-4) 25P
211	1-776-154-11	CABLE, FLAT (FVP-1) 26P
212	1-776-155-11	CABLE, FLAT (FVT-2B) 17P
252	1-776-150-11	CABLE, FLEXIBLE FLAT 30P

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
253	1-776-149-11	CABLE, FLEXIBLE FLAT 30P	
256	1-764-137-11	CONNECTOR, TRANSLATION 15P	
259	1-776-145-11	CABLE, FLAT (FCM-8) 16P	
260	1-776-148-11	CABLE, FLAT (FCM-11) 15P	
261	1-776-146-11	CABLE, FLAT (FCM-9) 9P	
262	1-776-147-11	CABLE, FLAT (FCM-10) 15P	
263	1-776-151-11	CABLE, FLAT (FCM-12) 14P	
264	1-776-162-11	CABLE, FLAT (FVC-2) 8P	
756	1-770-363-11	ELASTIC CONNECTOR	
851	1-658-990-11	FP-406 FLEXIBLE BOARD	
⚠AC101	1-957-614-11	HARNESS (AC-215)	
CN901	1-770-312-21	CONNECTOR 4P	
⚠CP100	1-468-108-11	POWER BLOCK (DSR-30P)	
⚠CP100	1-468-087-12	POWER BLOCK (DSR-30)	
⚠F101	1-532-203-00	FUSE, TIME-LAG (250V, 2A)(DSR-30P)	
⚠F101	1-532-743-11	FUSE, GLASS TUBE (125V, 2A)(DSR-30)	
FL501	1-517-485-11	TUBE, FLUORESCENT INDICATOR	
J801	1-566-850-31	CONNECTOR, (S) TERMINAL 4P	
M901	A-7044-015-A	DRUM ASSY (DEH-08B-R)	
M902	8-835-545-01	MOTOR, DC SCD11A/J-N (CAPSTAN)	
M903	X-3945-784-1	MOTOR ASSY, LM (LOADING)	
M904	8-835-537-01	MOTOR, DC SRD11A/J-N (REEL)	
M905	X-3602-112-1	MOTOR ASSY, T (TRAY)	
M906	A-7083-063-A	MOTOR BLOCK ASSY, C (C DOOR)	
M907	1-698-534-31	FAN, DC	
S001	1-762-550-11	SWITCH, ROTARY (MODE)	
S901	1-762-551-11	SWITCH, PUSH (REC PROOF)	
S902	1-572-288-11	SWITCH, PUSH (C IN SW)	

ACCESSORIES & PACKING MATERIALS

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	1-475-020-21	REMOTE COMMANDER (RMT-DS30)
	1-551-812-11	CORD, POWER (DSR-30)
	1-590-910-11	CORD SET, POWER (DSR-30P)
	1-751-739-21	CORD, CONNECTION (LANC cable, 1.5m)
*	3-602-174-01	CUSHION (UPPER)
*	3-602-175-01	CUSHION (LOWER)
	3-701-625-00	BAG, POLYETHYLENE
	3-858-739-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)
	3-858-739-21	MANUAL, INSTRUCTION (GERMAN) (DSR-30P)
*	3-968-420-41	INDIVIDUAL CARTON (DSR-30)
*	3-968-420-51	INDIVIDUAL CARTON (DSR-30P)

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HARDWARE LIST

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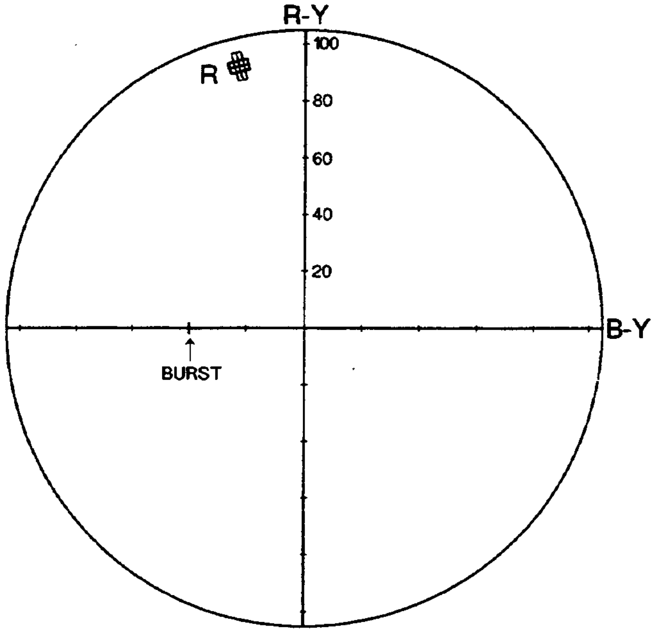
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3
#2	7-685-664-79	SCREW +BVTP 4X20 TYPE2
#3	7-682-645-01	SCREW +PS 3X4
#4	7-624-105-04	STOP RING 2.3, TYPE -E
#5	7-628-253-20	SCREW +PS 2X6
#6	7-628-253-00	SCREW +PS 2X4
#7	7-627-553-37	SCREW (M2X3), SPECIAL HEAD
#8	7-685-651-79	SCREW +BVTP 3X20 TYPE2 IT-3

FOR ENCODER R-Y INPUT LEVEL ADJUSTMENT AND DECODER HUE INPUT ADJUSTMENT

For NTSC model

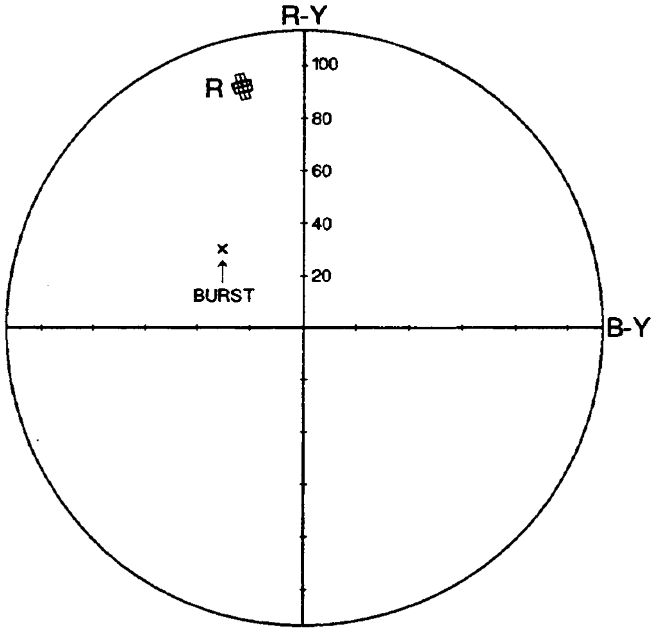
⊞ : FOR ENCODER R-Y INPUT LEVEL ADJUSTMENT
⊞ : FOR DECODER HUE INPUT ADJUSTMENT


R-Y
100
R
80
60
40
20
B-Y
BURST

Take a copy with a
clear sheet for use.

For PAL model

⊞ : FOR ENCODER R-Y INPUT LEVEL ADJUSTMENT
⊞ : FOR DECODER HUE INPUT ADJUSTMENT


R-Y
100
R
80
60
40
×
20
BURST
B-Y